SEC CONFIDENTIAL TREATMENT ORDERS: BALANCING COMPETING REGULATORY OBJECTIVES

A Dissertation

by

ANNE MARGARET THOMPSON

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

August 2011

Major Subject: Accounting

SEC Confidential Treatment Orders: Balancing Competing Regulatory Objectives

SEC CONFIDENTIAL TREATMENT ORDERS: BALANCING COMPETING REGULATORY OBJECTIVES

A Dissertation

by

ANNE MARGARET THOMPSON

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

Approved by:

Chair of Committee,	Thomas C. Omer
Committee Members,	H. Alan Love
	Senyo Y. Tse
	Michael Wilkins
Head of Department,	James Benjamin

August 2011

Major Subject: Accounting

ABSTRACT

SEC Confidential Treatment Orders: Balancing Competing Regulatory Objectives.

(August 2011)

Anne Margaret Thompson, B.A., Harvard College; M.S., Boston College

Chair of Advisory Committee: Dr. Thomas C. Omer

This study examines how the Securities and Exchange Commission balances competing regulatory objectives in its decisions to approve requests to withhold proprietary information from firms' financial reports. The confidential treatment process requires the SEC to balance the public interest in protecting proprietary information with the public interest in promoting disclosures to investors. I draw upon the economic and political science literatures on regulatory decision-making to test the strength of these interests on three aspects of the SEC's decisions to grant confidential treatment: the duration of time required to approve the request, the duration of time the SEC agrees to protect proprietary information from disclosure, and whether the firm is successful in securing confidential treatment for all redacted information.

I find that the public interest in promoting disclosure and protecting proprietary information influence different aspects of the SEC's decisions to grant regulatory exemptions for confidential treatment. Firms requiring greater monitoring by the SEC receive greater scrutiny and have lower odds of successful redaction. High proprietary costs are associated with significantly longer protection periods but proprietary costs

generally are not associated with duration to approval or the success of the application. Finally, I find that the SEC applies greater scrutiny to firms exhibiting objective and salient measures of low financial reporting quality although these firms have higher odds of success. These findings are consistent with the SEC reviewing CTRs to reduce the risk of legislative oversight.

This study contributes to the literature on disclosure regulation by providing evidence as to how securities regulators balance competing interests when reviewing requests for disclosure exemptions. These findings also contribute to the role of political influence on disclosure policy, as the SEC's exemption decisions are consistent with avoiding the threat of legislative oversight.

Second, these findings contribute to the literature on the SEC's regulatory decisions by demonstrating that the SEC staff appears to allocate resources and apply scrutiny to applications for disclosure exemptions using aspects of registered firms' financial reporting quality. Third, these findings contribute to the literature on redaction as a disclosure choice by providing evidence suggesting that firms with low financial reporting quality are more likely to redact, and I provide evidence on the success of this disclosure choice. Overall, these findings suggest that the public interest in promoting disclosure, as well as the threat of legislative oversight, influence the SEC's decisions when granting regulatory exemptions to protect proprietary information.

ACKNOWLEDGEMENTS

I gratefully acknowledge my dissertation committee, Thomas Omer (chair), Senyo Tse, Michael Wilkins, and Alan Love.

I appreciate the helpful comments and suggestions from workshop participants at Michigan State University, Texas A&M University, Texas Christian University, the University of Connecticut, the University of Illinois, the University of Maryland, and the University of Tennessee.

I thank Will Lauer for assistance with data collection. Finally, I thank my husband and family for their support and encouragement.

TABLE OF CONTENTS

CHAPTER Page

LIST OF TABLES

TABLE Page

CHAPTER I

INTRODUCTION

This study examines how the Securities and Exchange Commission balances competing regulatory objectives in its decisions to approve requests to withhold proprietary information from firms' financial reports. U.S. securities law provides SEC registrants with the opportunity to request confidential treatment for information that must otherwise be disclosed in regular SEC filings if the information is both proprietary and immaterial to investors.[1] In reviewing these requests, the SEC weighs the public interest in protecting firms' proprietary information with the public interest in promoting meaningful disclosures to investors. Procedurally, firms request confidential treatment for proprietary information by filing required reports with the sensitive information redacted and providing the SEC with the complete disclosures and justification for the redaction. The SEC may approve, deny, or request additional information about the confidential treatment request (CTR), and registrants may appeal unfavorable determinations. Approved CTRs protect proprietary information from public disclosure for a period of time agreed upon by the registrant and the SEC. While prior research has examined firms' decisions to redact information from material contract filings (Verrecchia and Weber 2006) and institutions' investment holdings (Agarwal et al. 2009), the SEC's decisions to approve CTRs remain unexplored.

This dissertation follows the style of *The Accounting Review.*

[1] Newman (1996, p.103) notes that the joint requirement that the information be commercially important but immaterial to investors represents "the inherent difficulty in applying for confidential treatment."

Investigating the SEC's decisions in this context is important for three reasons. First, little evidence exists on how securities regulators implement disclosure policies (Leuz and Wysocki 2009) or balance competing interests in the regulatory process. Second, the conflict between competing public interests exposes the SEC to legislative intervention if Congress or its constituencies question the SEC's discretionary decisions. Congress has, in the past, investigated the SEC for granting confidential treatment (Armstrong 1959) and recently restricted the SEC's discretion to designate information as confidential under the Dodd-Frank Act (U.S. House of Representatives 2010). In addition, recent press coverage surrounding AIG's request to redact information from its Troubled Asset Relief Program contract was critical of the SEC although the commission denied AIG's redactions of material information. To reduce the risk of legislative intervention, the SEC may base CTR approval decisions on factors unrelated to the merits of the application, such as the firm's financial reporting quality or incidence of noncompliance in prior periods. Finally, firms may opportunistically request confidential treatment to avoid or delay disclosure of material information to investors (Agarwal et al. 2009). Therefore the SEC plays an important role in constraining this disclosure strategy.

I examine the SEC's balancing of the public interest in reducing the proprietary costs of disclosure against the public interest in promoting adequate financial statement disclosure using three aspects of CTR approval decisions. I consider the duration of time between CTR request and approval (duration to approval) as a measure of the potential conflict between these competing interests following prior economic studies of

regulatory agency decision-making (Ando 1999; Sigman 2001; Kosnick 2005). Second, I examine the duration of time over which the SEC agrees to protect proprietary information from public disclosure (the protection period). Third, I examine whether the firm succeeds in securing confidential treatment, defining a successful request as SEC approval of a CTR in its entirety, without requiring un-redaction of some or all of the withheld information.

I measure my primary public interest variables, the need to limit the costs of proprietary information disclosure and the need to promote adequate financial statement disclosure as follows: I measure proprietary costs using industry concentration, barriers to entry, and industry profitability. I expect that higher proprietary costs are associated with shorter duration to approval, longer protection periods, and higher odds of success. I measure the public interest in promoting adequate financial disclosure using the monitoring criteria set forth by Congress in Section 408 of the Sarbanes-Oxley Act. Section 408 directs the SEC to review registered firms' financial reports at least once every three years, focusing monitoring efforts on firms with high price-to-earnings ratios, high market value of equity, high volatility, and previous restatements. These criteria reflect the dimensions of financial reporting and disclosure that Congress views as requiring greater monitoring and posing greater risk to investors. I expect that CTRs submitted by firms requiring greater monitoring under the Section 408 have longer duration to approval, shorter protection periods, and lower odds of success.[2]

[2] Because approved CTRs protect redacted information from public disclosure, the specific information redacted is not observable and I cannot design direct tests to evaluate the materiality of redacted information. In un-tabulated analysis, I examine cumulative abnormal returns to firms and their product

In addition, the SEC faces political costs from legislative oversight when its discretionary decisions are questioned by the public or Congress. Congress monitors the SEC using "fire-alarm" oversight, relying on the press and voting constituencies to notify the legislature when intervention is required (McCubbins 1985; Kinney 2005).[3] It is easier and less costly for these parties to document evidence of regulatory failure than of regulatory success (Watts and Zimmerman 1986) and economic studies of other federal agencies, such as the FDA, conclude that these asymmetric costs distort regulators' decisions (Peltzman 1973; Olson 1995).[4] For these reasons, the SEC may apply greater scrutiny to or reject CTRs from firms with the most salient measures of low financial reporting quality because these measures impose the lowest cost on monitors. I refer to objective and salient measures of low financial reporting quality as "red flags" due to the SEC's usage of the term in AAERs and public statements as a signal to apply additional scrutiny to an item. Due to their objectivity and salience to investors and the press, I classify restatements, internal control material weaknesses, and previous SEC investigations as red flags. Thus, I also attempt to determine whether the

---

market competitors surrounding un-redactions. I find that firms incur significantly negative, albeit economically small, cumulative abnormal returns (-1, 1) surrounding un-redactions and that firms in the same four digit SIC code (an approximation of the firm's closest product market competitors), earn positive significant cumulative abnormal returns over (-1, 1) surrounding un-redactions. These findings are consistent with the SEC compelling disclosure of information that is material to a firm's investors as well as useful to a firm's competitors.

[3] The alternative to fire-alarm oversight is "police-patrol" oversight, i.e. regular monitoring through audits of the agency and other procedures that produce regular information streams to congress. Fire-alarm oversight is considered to be cost effective compared to the expense associated with regular monitoring (Lupia and McCubbins 1994).

[4] Several studies in the economics literature consider the FDA's drug approval process. The FDA has incentives not to approve drugs with observable side effects because the cost to documenting harm resulting from the side effects is lower than the cost of quantifying the loss incurred by those who did not benefit from drug approval.

SEC's decisions to allocate resources to CTR review and to allow or deny a redaction are associated with these red flags.

Using a sample of over 900 approved and 60 unapproved CTRs for material contracts filed in 2008 and 2009, I find that the public interests in promoting disclosure and protecting proprietary information, as well as the threat of legislative oversight, influence different aspects of CTR approval decisions. I find that firms exhibiting red flags have significantly longer approval times but higher likelihood of successful redaction than other firms, possibly because they are less likely to request redaction of ineligible information. Proprietary costs influence the duration of time over which the SEC protects information from disclosure, but proprietary costs do not influence duration to approval or the success of the CTR application. Finally, I find some evidence that firms requiring greater monitoring under SOX 408 have longer duration to approval and lower odds of success. Overall, these findings suggest that the public interest in promoting disclosure, as well as the threat of legislative oversight, influence the SEC's decisions when granting regulatory exemptions to protect proprietary information.

In supplemental analysis, I examine proprietary costs and red flags as determinants of firms' decisions to redact information from SEC filings. I find that firms exhibiting red flags have significantly higher odds of requesting confidential treatment. I also find that firms with higher proprietary costs are significantly more likely to redact, consistent with prior research (Verrecchia and Weber 2006). Finally, I use this analysis to develop a selection model to control for selection bias in the SEC's approval decisions

and find consistent results when controlling for firms' decisions to request confidential treatment.

This study contributes to the literature on disclosure regulation by providing evidence on how the SEC balances competing public interests when evaluating requests for disclosure exemptions. Little evidence exists on the process by which securities regulators implement disclosure regulations or on the role of political intervention in implementing disclosure regulations (Leuz and Wysocki 2009). These findings provide evidence on both topics and suggest that the SEC implements disclosure exemption policies to avoid the legislative intervention.

This study also contributes to the literature on the SEC's regulatory decisions by demonstrating that the SEC staff appears use aspects of registrants' financial reporting to allocate resources and apply scrutiny to CTRs. These findings complement recent research using SEC Accounting and Auditing Enforcement Releases (AAERs) and comment letters to examine the determinants and consequences of SEC staff decisions (Lei et al. 2010; Chen and Johnston 2010; Ertimur and Nondorf 2006; Files 2010; Correia 2009). However, AAER and comment letter decisions are contingent on the registrant's earnings quality and the SEC's decisions to pursue investigations and reviews. CTRs provide an opportunity to study the SEC's resource allocations from a perspective other than the SEC's selection decisions because registrants petition the staff for confidential treatment.

Finally, this study contributes to the literature on redaction as a disclosure choice by examining the factors that influence the SEC's decisions to approve CTRs and,

correspondingly, the extent of resources firms devote to securing confidential treatment for their proprietary information. Prior research finds that redacting firms have lower trading volume, smaller dollar depth, and a larger adverse selection component of the bid-ask spread (Verrecchia and Weber 2006), consistent with theoretical predictions linking greater disclosure to lower information asymmetry (e.g. Verrecchia 1983, 2001). In addition, redacting institutions and hedge funds are more likely to follow non-standard investment strategies and redacted investment positions out-perform disclosed investment positions (Agarwal et al. 2009). I find that firms with low financial reporting quality are significantly more likely to request CTRs but that their redactions are less likely to be ineligible or opportunistic. In addition, I find that longer approval time for regulatory exemptions, and hence greater opportunity cost to management and higher legal fees, may be unintended consequences of poor financial reporting quality. Finally, I extend Verrecchia and Weber's (2006) findings on registrants' propensity to redact information from material contract filings to a larger sample and provide evidence on the success of this disclosure choice.

CHAPTER II

HYPOTHESIS DEVELOPMENT

Background Information on Confidential Treatment Requests for Material Contract Filings

Firms' contracts with outside parties often contain sensitive information that may be useful to competitors. For example, price and quantity schedules in procurement contracts may be valuable to competitors in setting production levels. The SEC requires firms to disclose entry into material definitive agreements that are not made in the ordinary course of business (hereafter "material contracts") and publicly file the contract as an exhibit to an SEC filing. Firms must disclose entry into material contracts on Form 8-K filing within four days of contract execution, and may file the contract as an exhibit either to the 8-K or to the next periodic filing (SEC 2004).

Most firms request CTRs under "the (b)(4) exemption" to The Freedom of Information Act (FOIA) (SEC 1997) which provides an exemption for "trade secrets and commercial or financial information, obtained from a person, and [that is] privileged and confidential." The exemption for proprietary information "encourages submitters to voluntarily furnish useful commercial or financial information to the government and it correspondingly provides the government with an assurance that such information will be reliable" (DOJ 2004).[5] In this way, the FOIA exemption for proprietary information promotes the public interest by encouraging both innovation and greater information exchange between regulators and regulated firms.

[5] Prior to the FOIA (passed in 1966), the Administrative Procedures Act governed disclosure of information by federal agencies and the executive branch.

Procedurally, firms file a redacted version of the contract as an exhibit to the mandatory filing in EDGAR and indicate that portions have been redacted pursuant to a request for confidential treatment. Firms may not make overly broad redactions (SEC 1997), may not redact required disclosures, and may not redact information investors would judge to be material.[6] The firm also provides a complete copy of the contract to the SEC Staff with an analysis of the request for confidential treatment. The analysis must justify the eligibility of the information for confidential treatment under the FOIA, the competitive harm that would result from full disclosure, and the immateriality of the disclosures to investors. In addition, the firm must specify the date until which the information is to remain confidential, the rationale for the confidential period, and consent to the release of confidential information for official purposes.

The SEC expects to respond to CTRs within 28 days of receipt, either by approving the CTR and issuing a notice known as a "CT Order" or by sending a comment letter to the firm (SEC 2001; Newman 1996). Firms must respond to comment letters within 21 days (SEC 2001). By allowing firms to file redacted contracts pending CTR approval, the SEC provides confidential treatment to firms during the review period. This structure imposes strong incentives on the SEC staff to review CTRs within the stated deadline (Newman 1996).

The SEC may reject CTRs if the firm does not adequately justify its request. In addition, the SEC will deny CTRs for procedural reasons, such as prior disclosure of

[6] The SEC lists the following as examples of required disclosures ineligible for redaction: interest expense, the identity of a 10% customer, the dollar amount of backlog orders, the duration and effect of intangibles, required disclosures in the MD&A, or related party transactions (SEC 1997).

redacted information even if the information was disclosed in error. Finally, the SEC has discretion in reviewing CTRs. "Rule 24b-2 merely provides a procedure for requesting confidential treatment; such treatment is not granted unless the information is exempt from disclosure under FOIA and under the Commission's public interest concerns" (Comizio 1983). Although firms must demonstrate that redacted information is eligible for confidential treatment, eligibility does not guarantee CTR approval.

Theories of Regulatory Decision Making

The United States Congress delegates substantial authority to independent federal agencies, such as the SEC, to regulate and promulgate rules and standards that are in the public interest (Fiorina 1982). Congress retains substantial power over independent federal agencies in the form of budget appropriations, confirmation hearings for new commissioners, and convening investigations and hearings on agency affairs. Congress "…holds the power of life or death in the most elemental terms throughout the existence of any agency. The power to terminate, either by refusal to renew authorization or refusal to appropriate funds, is firmly lodged in Congress and nowhere else," (McCubbins 1985, p. 728). Posner (1974, pg 338) notes "Unlike business firms, government agencies must go to *their* capital markets – the legislative appropriations committees – each year." However, Congress rarely exercises its control over the bureaucracy and this stylized fact has generated considerable research as to why bureaucracies appear to operate with great discretion, why Congress appears to exercise little control, and what circumstances trigger significant congressional intervention.

Two main theories explain regulatory agencies' discretionary decisions and the general absence of legislative intervention: Congressional Dominance Theory and External Signals Theory.[7] Congressional Dominance Theory (Weingast and Moran 1983) uses principle-agent theory to propose that Congress controls Federal agencies through strong ex-ante incentives and the threat of ex-post sanctions. In this setting, the appearance of regulatory discretion and the absence of legislative intervention both indicate an effective incentive structure and evidence that regulators generally implement the policy choices of Congress. External Signals Theory (Joskow 1974; Noll 1985) suggests that regulators have difficulty identifying and implementing actions that are in the public interest because the concept of the public interest is "elusive" (Noll 1985). Instead, regulators gauge their success in meeting the public interest based on positive and negative responses to their decisions. Thus, regulators take actions that generate positive responses from outside groups and avoid taking actions that generate negative responses. Both Congressional Dominance and External Signals theories predict that agencies seek to make decisions that are in the public interest and to avoid legislative intervention.

The SEC has faced legislative intervention in the past due to its decisions to issue CTRs and, more generally, regulatory exemptions. The House of Representatives Special Subcommittee on Government Information investigated the SEC in 1955 to

[7] Other theories that describe regulatory decision-making and discretion are the Traditional View and Captive Theory (Stigler 1971; Peltzman 1976). The Traditional View holds that Congress cannot control the federal regulatory agencies. Under this theory, agencies are not constrained to make decisions that align with the views of Congress. However this position has largely been replaced with Congressional Dominance and External Signals. Captive Theory is not applicable to this decision process because SEC registrants do not meet the theoretical conditions under which regulated firms can capture their regulator.

determine "…whether the Commission, dedicated to the essential task of requiring publication of pertinent information by corporations and brokers and dealers, was itself concealing information which might appropriately be made public," (Armstrong 1959, p. 806). The SEC defended its practices, noting:

> "…there is a limited amount of information which cannot be made generally available for the public. This includes information in the Commission's files which Congress specifically provided should be kept confidential where disclosures would be contrary to the public interest as in the case of trade secrets and similar materials," (SEC 1956, p.22).[8]

In addition, the U.S. Senate Committee on Government Affairs investigated the SEC in 2002 for granting to Enron a regulatory exemption from the Investment Company Act of 1940 (US Senate 2002).

More recently, the House Committee on Governmental Oversight and Reform held a hearing in January 2010 on AIG's "bailout," including AIG's public disclosures surrounding its Troubled Asset Relief Program (TARP) contract with the Federal Reserve Bank of New York. The SEC required AIG to disclose its TARP contract to investors as a material contract and AIG requested confidential treatment for the entirety of Schedule A detailing the controversial "backdoor bailout" of sixteen financial institutions that had purchased credit default swaps from AIG. AIG and the Federal Reserve Bank of New York argued that Schedule A must remain confidential to avoid price declines that would limit the Federal Reserve's ability to sell the securities.[9] The SEC judged the identity of and payments to the sixteen financial institutions to be

---

[8] This report footnotes the applicable sections of securities law under which the Commission grants confidential treatment, specifically Section 24b of the 1934 Act under which most CTRs are granted.

[9] The committee's document production is archived http://documents.republicans.oversight.house.gov/

material to AIG's investors and therefore ineligible for redaction. AIG re-filed an amended Schedule A three times, each with fewer redactions, before the SEC approved redaction of the individual Cusips in May 2009. Although the SEC disallowed redaction of material information, the press coverage surrounding AIG's disclosures suggested that the SEC aided AIG and the Federal Reserve in concealing information from Congress and American taxpayers. The press acts as an important monitor on behalf of Congress and public criticism of the SEC's discretionary regulatory decisions raises the risk of oversight. In response to this hearing, the SEC's Office of the Inspector General initiated an audit of the confidential treatment process.

Finally, Congress amended the Dodd-Frank Act in September 2010 to restrict the SEC's discretion to designate information obtained during examinations and investigations as confidential.[10] The House Committee on Governmental Oversight and Reform Chair Edolphus Towns sponsored the amendment, citing concerns surrounding the SEC's "willingness to exploit the secrecy provisions" afforded to the agency in the Act (Towns 2010). This recent example of Congressional intervention underscores the tension between Congress and SEC surrounding confidential treatment of company information.

Hypotheses

The SEC requires mandatory disclosures as a remedy to past market failures with the expectation that better informed investors lead both to more efficient prices and to

[10] Confidential treatment for information obtained through examinations and investigations is considered to be information not voluntarily furnished to a regulator and falls under a different FOIA exemption than routine EDGAR filings such material contracts.

increased difficulty in perpetrating fraud and other stock price manipulation (Phillips and Zechner 1981). In these ways, mandatory disclosure is in the public interest by protecting investors and promoting capital formation has existed since the SEC's founding and persists through today. However, withholding proprietary and commercially sensitive information from public disclosure, as provided for by Congress in the FOIA exemption, also promotes the public interest. Although theory suggests that the SEC will balance competing public interests to avoid legislative oversight, how the SEC weights the public interests of promoting adequate disclosure and reducing proprietary costs to disclosure ultimately is an empirical question. Accordingly, I draw upon economic studies of regulatory agency decision-making to investigate this weighting in the CTR approval process.

Duration to Approval

The first hypothesis examines the duration of time between CTR request and approval. Duration to approval, or regulatory delay, reflects the net cost/benefit tradeoff among competing interests in a regulatory setting (Kosnick 2005). Many economic studies base conclusions concerning the strength and incentives of competing interests on their influence over regulatory delay (Ando 1999; Sigman 2001; Carpenter 2002; Kosnick 2005). Fish and Wildlife Service's decisions to approve listing under the Endangered Species Act are accelerated (delayed) based on public support (opposition) (Ando 1999). The Environmental Protection Agency's priorities for Superfund remediation reflect competing incentives; the marginal effect of higher income and voter-turnout in affected communities accelerates clean-up and the existence of liable

parties who bear costs of remediation are associated with lower priority (Sigman 2001). Interest groups and media coverage of medical conditions influence the Food and Drug Administration's new pharmaceuticals approval (Carpenter 2002). However, the FDA also has discretion to approve "important" drugs more quickly (Dranove and Meltzer 1994) and may be influenced by firm specific characteristics such as domestic versus foreign ownership, R&D intensity, and diversification (Olson 1997). Finally, Kosnick (2005) finds that all interested parties to the Federal Energy Regulatory Commission's hydroelectric dam re-licensing process may prefer longer delay.

In addition, recent studies of the SEC's comment letter process measure the severity of disagreement between managers and the SEC using duration of time required to resolve a comment letter (Chen and Johnston 2010; Ertimur and Nondorf 2006). IPO firms whose CFOs have prior public company experience have shorter comment letter periods (Ertimur and Nondorf 2006), indicating less disagreement between the firm and the SEC concerning the quality of financial reporting. In addition, firms with the longest comment letter periods experience the greatest improvement in information environment following resolution of the comment letter (Chen and Johnston 2010).

Following prior research, I expect the duration to approval for CTRs to reflect the SEC's weighting of competing interests. Regarding the public interest in promoting adequate disclosure to investors, redaction increases information asymmetry (Verrecchia 1983, 2001; Verrecchia and Weber 2006) and Lev (1988 p.3) notes that "inequity in capital markets resulting from information asymmetry can and does occur, and that its social consequences in the form of high transaction costs, thin markets, low liquidity

and, in general-decreased gains from trade, are indeed very undesirable." I measure the public interest in promoting disclosure using criteria set forth by Congress in Section 408 of the Sarbanes Oxley Act. SOX Section 408 requires the SEC to increase monitoring of registered firms' financial reports and to review each firm's financial reports at least once every three years. Section 408 specifies the aspects of financial reporting and disclosure that Congress views as requiring greater monitoring by the SEC due to the risk posed by these firms to investors.

I expect that an increase in information asymmetry due to redaction is less desirable from a policy standpoint among firms posing greater risk to investors and that the SEC will apply greater scrutiny to CTRs from such firms. Accordingly, I expect firms requiring greater monitoring under SOX 408 have significantly longer duration to approval.

Hypothesis 1a: CTRs from firms requiring greater monitoring under SOX 408 exhibit longer duration to approval

Regarding the public interest in reducing proprietary costs to disclosure, firms with high proprietary costs may make stronger cases for eligibility, leading to faster approval for firms with high proprietary costs. However, the implications for firms with low proprietary costs are unclear. The SEC may reject CTRs quickly when firms cannot meet the eligibility criteria for confidential treatment. Alternately, the SEC may allow the firms that submit weak applications to provide additional documentation, increasing the duration to approval. Thus, I make no sign prediction for the role of proprietary costs on duration to approval, as follows:

Hypothesis 1b: Proprietary costs are associated with CTR duration to approval

Protection Period Approved by the SEC

The second set of hypotheses examine the duration of time over which the SEC agrees to protect proprietary information from public disclosure (the protection period). I expect that the protection period reflects the strength of a firm's claims of competitive harm because the SEC is "generally more amenable to claims for a longer period when the applicant's arguments regarding competitive harm have strong merit," (Newman 1996, paragraph 21). The SEC does not approve redaction periods beyond the life of the contract (SEC 2001) and prefers to grant confidential treatment for shorter time periods. Further, the SEC encourages firms seeking longer confidential treatment periods to apply for extensions to the original CTR rather than granting confidential treatment for long time periods (Newman 2001). For these reasons, I expect that strong claims of proprietary costs are associated with longer redaction periods. In addition, I expect that the SEC may grant shorter protection periods to firms that pose greater financial reporting risk to investors.

Hypothesis 2a: CTRs from firms requiring greater monitoring under SOX 408 receive shorter protection periods

Hypothesis 2b: High proprietary costs are associated with longer protection periods

Outcome of the CTR Decision

The third set of hypotheses examines the success of CTR applications, i.e., the probability that the SEC does not reject redactions of some or all of the withheld

information. The SEC may reject CTRs that do not meet the criteria for confidential treatment, either because the information is not proprietary or because the information is material to investors. In addition, the SEC may exercise discretion in approving CTRs even if the CTR meets the eligibility criteria.

Prior research finds that regulators have incentives to reject applications that pose potential political costs in the future due to the asymmetric cost of documenting regulatory failure relative to regulatory successes (Watts and Zimmerman 1986). In the case of the Food and Drug Administration's (FDA) approval of new drug applications, the side-effects of a drug approved for use are observable and measurable whereas the loss incurred by those who would have benefitted from a rejected application are neither observable nor easily quantified (Peltzman 1973; Olson 1995). As a result, the FDA may reject drugs with observable side-effects because these drugs pose a higher risk of political costs and legislative intervention in the future. Because prior studies of Federal agencies find that regulators are sensitive to the threat of legislative intervention and may reject applications that pose high political costs, I expect that the SEC is sensitive to the threat of legislative intervention and may reject applications that pose political costs.

Hypothesis 3a: Firms requiring greater monitoring under SOX 408 have lower odds of success

Hypothesis 3b: Low proprietary costs are associated with lower odds of success

Red Flags

A common theme in Congressional hearings and reports critical of the SEC is that the SEC failed to act on warning signs of financial reporting failures or "red flags." The Chairman of the House Operations Subcommittee on Commerce accused the SEC of ignoring red flags following the 1985 collapse of Bevill, Bresler, and Schulman Asset Management, an unregulated government securities dealer. The SEC had not investigated recent allegations of misconduct at the firm because the alleged improprieties were less severe than previous infractions that resulted in an SEC investigation and sanction (NYT 1985). More recent examples of the SEC's failure to heed "red flags" include the revelations that the SEC was aware of the substantial risk posed by Bear Stearns to the market as early as 2005 (SEC 2009) and that the SEC had received several "substantial" tips that Bernard Madoff operated a Ponzi scheme as early as 1991 (SEC 2008). In addition, the SEC frequently cites red flags when discussing its decisions to sanction auditors, practitioners, and firms in the enforcement process. The SEC included the term "red flag" in 84 separate AAERs issued between 2000 and 2010.

Congress monitors the regulatory agencies using "fire-alarm" oversight (McCubbins 1985; McCubbins and Schwartz 1984), relying on the public to identify divergence from the public interest and alert Congress to intervene. Because the public can most easily identify objective and salient instances of financial reporting failures, I expect that the SEC responds to these incentives by applying additional scrutiny to firms with red flags, protecting confidential treatment for shorter time periods, or by rejecting applications from firms with red flags due to the higher risk of future political costs due

to legislative intervention. Accordingly, I set forth the following hypotheses, stated in the alternative form:

Hypothesis 4a: Red flags are associated with longer duration to approval

Hypothesis 4b: Red flags are associated with shorter protection periods

Hypothesis 4c: Red Flags are associated with lower odds of success

CHAPTER III

RESEARCH DESIGN

Sample Selection

My sample consists of all CTRs approved between May 1, 2008 and November 30, 2009. Prior to May 1, 2008, the SEC did not publically disclose CTR approvals, therefore CTRs approved prior to this date are not observable. Each approved CTR specifies the date and form type of the initial filing in which the CTR was requested, whether the CTR is a new request or a request to extend a prior CTR, the exhibits that contain approved redactions, the period over which the redactions will remain confidential, and whether the initial filing was amended or amended to include un-redactions. Refer to Appendix B for an example of a partially-approved CTR.

I construct several variables from this data. First, *MONTHS_TO_APPROVAL* equals the days between the initial filing date and the approval date divided by 30 and rounded up to the nearest month. *PROTECTION_PERIOD* equals the length of time that the SEC approves confidential treatment of the redacted information measured in years. *SUCCESS* is an indicator variable equal to one if the registrant did not un-redact information or amend the initial CTR and is equal to zero otherwise. *EXHIBIT_COUNT* equals the number of exhibits listed as redacted on the CT Order. *FORM_8K* is an indicator variable equal to one if the material contract was filed in an 8-K or 6-K filing and equal to zero otherwise. *FOREIGN_FILER* is an indicator variable equal to one if the firm is a foreign registrant and equals zero otherwise. The main sample used to test

the SEC's approval decisions consists of 940 approved CTRs issued between 5/1/08 and 11/30/09 with available data for all tests.

Duration of Time to CTR Approval

Prior studies examine regulators' weighing of competing public interests using the coefficients of the competing interests in regressions on duration to approval (Kosnick 2005; Ando 1999; Olson 1997; Sigman 2001). I follow this methodology and examine the duration of time required to approve a CTR to examine the weighting of the public interest in promoting disclosure, the public interest in protecting proprietary information, and the role of red flags on duration to approval. Figure 1 illustrates the sequence of events for this test.

Staff Legal Bulletin No. 1 notes that the SEC aims to review and either approve or return comments to the registrants within 28 days (SEC 2001). If the CTR is not approved, the registrant must respond within 21 days. Based on this time-frame, I measure duration of time to approval in number of months, a count variable.[11] *MONTHS_TO_APPROVAL* is over-dispersed as a dependent variable (mean=1.371, variance=3.065), which may bias downward standard errors in a Poisson regression (Long and Freese 2006). Instead, I use a negative binomial regression which fits a

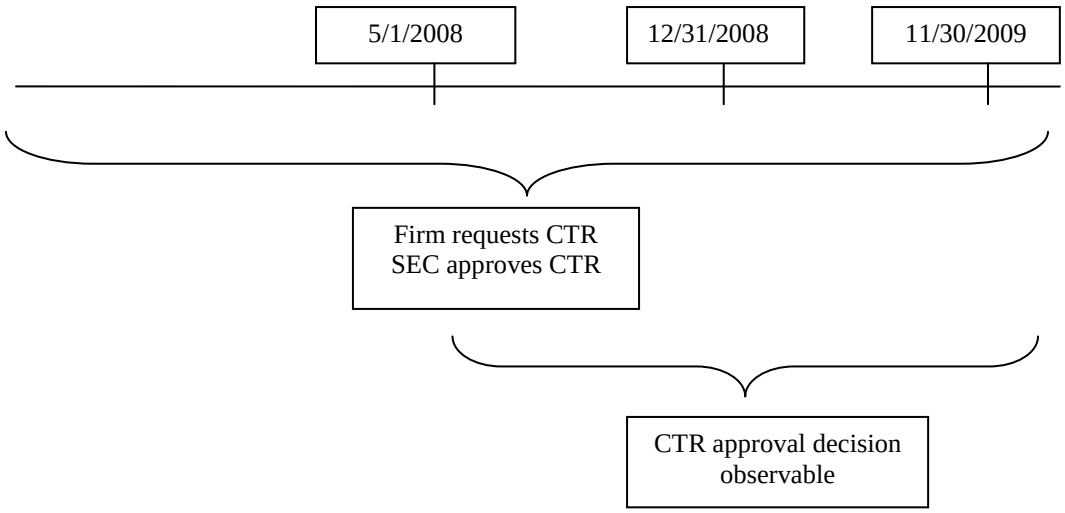
[11] This guideline applies unless the CTR is requested in conjunction with a registration statement. Registration statements comprise three percent of the sample. Excluding registrations has no effect on the inferences.

FIGURE 1

Sequence of events in the duration analysis

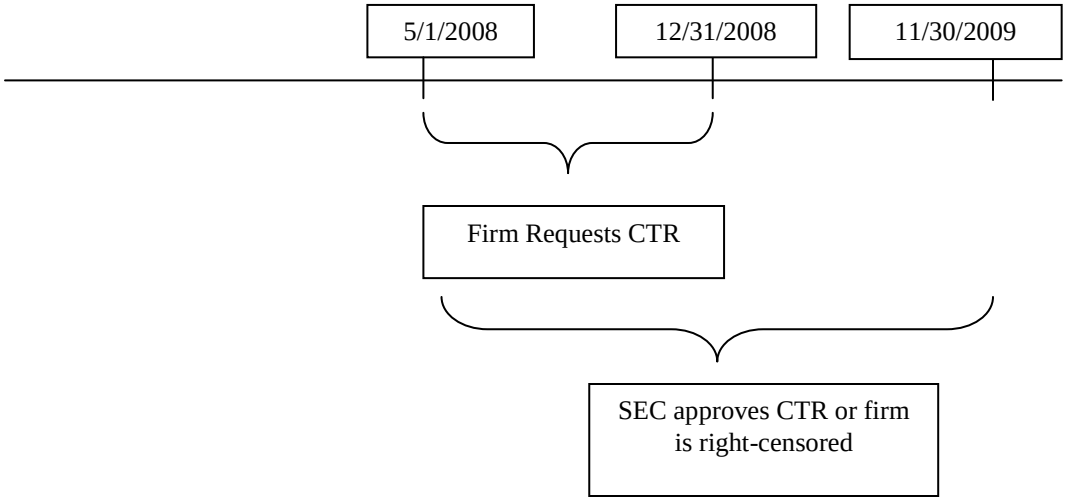
Model 1: Negative Binomial Regression

(2008 and 2009 approvals)



Model 4: Hazard Model

(2008 requests only)



Poisson regression with an additional error term for unobserved heterogeneity to correct the downward bias in the standard errors. The independent variables in this regression are the SOX 408 measures (H1a), proprietary costs (H1b), red flags (H4a), and CTR and firm controls. I estimate Model 1 as follows:

$$MONTHS\_TO\_APPROVAL_i = \exp(\alpha + \beta_{1\text{-}3}\text{Section 408}_n + \beta_{4\text{-}9}\text{Proprietary Costs}_n + \beta_{10\text{-}12}\text{Red Flags}_n + \beta_{13\text{-}20}\text{Firm and CTR Controls}_n)\delta_i$$

In addition to these variables, I include indicator variables for year and fiscal quarter to control for agency budget and workload. I cluster the standard errors by firm to control for time-series correlation.

Length of the Protection Period

The second SEC decision I study is the duration of time over which the SEC agrees to protect proprietary information from disclosure. *PROTECTION_PERIOD* equals the number of years between the CTR request date and the date through which the SEC agrees to confidential treatment, rounded to the nearest year. The variable *PROTECTION_PERIOD* is a count variable and is over-dispersed (mean=5.173, variance=11.406), therefore I use a negative binomial regression to model this decision. The independent variables in this regression are the SOX 408 measures (H2a), proprietary costs (H2b), red flags (H4b), and CTR and firm controls. Similar to Model 1, I also include indicator variables for year and fiscal quarter to control for agency budget and workload and cluster standard errors by firm. I estimate Model 2 as follows:

$$PROTECTION\_PERIOD_i = \exp(\alpha + \beta_{1\text{-}3}\text{Section 408}_n + \beta_{4\text{-}9}\text{Proprietary Costs}_n + \beta_{10\text{-}12}\text{Red Flags}_n + \beta_{13\text{-}20}\text{Firm and CTR Controls}_n)\delta_i$$

Probability of Successful Redaction

Third, I examine the probability that the SEC will approve the CTR without requiring un-redaction of some or all redacted information. I identify un-redactions and partial un-redactions from two sources. First, approved CTRs state whether the registrant amended or un-redacted information prior to approval (a partial un-redaction). Second, I search amended SEC filings for evidence of un-redactions or withdrawn CTRs using keywords "confidential treatment" or "redact" in the explanatory section. I combine these two searches into an indicator variable equal to one if the firm receives approval with no un-redaction and equal to zero if the firm amended or un-redacted information (*SUCCESS*). I use a logistic regression to examine the odds of a firm receiving CTR approval without revision (Model 3) as follows:

$$\Pr(SUCCESS=1)_i = \exp(\alpha + \beta_{1\text{-}3}\text{Section 408}_n + \beta_{4\text{-}9}\text{Proprietary Costs}_n + \beta_{10\text{-}12}\text{Red Flags}_n + \beta_{13\text{-}20}\text{Firm and CTR Controls}_n)$$

This model includes indicator variables for year and quarter to control for agency budget and workload. Standard errors are clustered by firm to control for time-series correlation.

SOX Section 408 Measures

I measure the public interest in promoting adequate disclosure using the SOX Section 408 monitoring criteria. The Act specifies that, among other unspecified factors, the SEC should consider

> "(1) issuers that have issued material restatements of financial results; (2) issuers that experience significant volatility in their stock price as compared to other issuers; (3) issuers with the largest market capitalization; (4) emerging companies with disparities in the price to earnings ratio; (5) issuers whose operations significantly affect any material sector of the economy; and (6) any other factors the Commission may consider relevant."

RESTATEMENT is an indicator variable equal to one if the firm reported a non-technical financial restatement between 2004 and 2007 per Audit Analytics or keyword search of firms' filings for firms without Audit Analytics coverage.[12] In addition, restatements are objectively determined and easily observable to the public through either press releases or review of SEC filings, thus restatements are also classified as a Red Flag.[13] I measure volatility using the firm's beta calculated over the period (-300, -45) prior to the CTR request date and construct an indicator variable equal to one if the firm's beta exceeded 1.5 (*HIGH_VOLATILITY*).[14] I measure firms with high market value of equity as an indicator variable equal to one if the firm's market value of equity as of the 2007 balance sheet date is in the highest decile of firms with available data on Compustat and equal to zero otherwise (*HIGH_MVE*). I measure the P/E Ratio as year-

[12] Audit Analytics includes only restatements due to non-GAAP financial reporting and excludes restatements due to changes in accounting principles and adoption of new accounting standards.
[13] In supplemental tests, I vary the measurement window on prior restatements and material weaknesses.
[14] Value Line considers a beta greater than 1.5 to be high. In supplemental analysis, *HIGH_VOLATILITY* equals one if firm beta is in the highest decile within sample (beta>=1.88). This measure of volatility has a negative and significant coefficient for *DURATION_TO_APPROVAL*, but inferences for other tests are consistent with tabulated results.

end closing price per share divided by earnings per share as of the 2007 balance sheet date (*PE_RATIO*). I do not operationalize criteria (5) for issuers whose operations significantly affect any material sector of the economy due to ambiguity in defining the underlying construct and concerns regarding co-linearity with *HIGH_MVE* and industry concentration. Hereafter, the term "firms requiring greater monitoring under SOX 408" refers to firms with higher P/E Ratios, *HIGH_MVE* equal to one, *HIGH_VOLATILITY* equal to one, and/or *RESTATEMENT* equal to one.

Proprietary Costs

I measure proprietary costs using barriers to entry, industry concentration, and profitability (X. Li 2010), and reported operating segments (Harris 1998; Leuz 2004). I control for barriers to entry using industry investment in fixed assets and firm and industry investment in research and development (X. Li 2010). Both fixed assets and R&D impose barriers to entry in an industry by requiring greater initial investment. Thus, firms in capital and R&D intensive industries may face a lower threat of new entry. Firm research and development expense (*RD*) equals total research and development expense scaled by total assets. Industry R&D intensity (*IND_RD*) equals mean research and development expense scaled by total assets as of the 2007 balance sheet date for all firms in the same two digit SIC code as of the 2007 balance sheet date. I set *RD* and *IND_RD* equal to zero for firms that do not report research and development expense. Industry capital expenditures (*IND_CAPX*) equal mean capital expenditures for all firms in the same two digit SIC code as of the 2007 balance sheet date. I control for industry profitability (*IND_ROA*) using industry mean ROA as of the

2007 balance sheet date. Finally, I include the log number of operating segments per Compustat Segment (*SEGMENTS*) to control for diversification and the effect of proprietary costs on segment reporting.[15]

I control for industry concentration using the natural log of the number of firms per NAICS industry as reported by the 2007 Economic Census (*LOG_FIRMS*). Ali et al. (2009) find that measuring industry concentration using Hirfindahl indices constructed from Compustat data may lead to incorrect inferences concerning the role of industry concentration on firm's disclosure choices. Instead, they recommend using industry concentration measures published by the U.S. Census Department. I do not use Census industry concentration measures because Census provides industry concentration measures only for manufacturing firms and a substantial proportion of my sample consists of firms in non-manufacturing industries. Refer to Appendix A for validation of *LOG_FIRMS* as an inverse measure of industry concentration.

Red Flags

In addition to *RESTATEMENT*, I include two additional measures of red flags. *SEC_INVESTIG* equals one if the SEC has investigated the firm for a restatement since 2004 per Audit Analytics. Investigations reflect restatement severity because the SEC chose to allocate resources to these financial reporting misstatements. This variable also separates severe from non-severe restatements due to the growth in reported restatements in recent years (Scholz 2008).

[15] I measure proprietary costs at the firm level using the industry code assigned to the firm in Compustat Fundamentals Annual or Quarterly databases. I do not measure proprietary costs at the operating segment level for multi-segment firms due to difficulty matching the material contract filing to the correct operating segment.

Finally, *ICMW* is an indicator variable equal to one if the firm reported an internal control material weakness under Section 404 of the Sarbanes Oxley Act between 2004 and 2007 per Audit Analytics or through keyword searches of firms without coverage in Audit Analytics. A material weakness is the most severe category of control weakness and is defined as "a significant deficiency or combination of significant deficiencies that results in more than a remote likelihood that a material misstatement of the annual or interim financial statements will not be prevented or detected," (PCAOB 2004). Material weaknesses may signal the potential for financial reporting problems in the future, and Doyle et al. (2007) find an increased incidence of restatements among firms disclosing material weaknesses. Section 404 material weaknesses are objectively determined and publicly observable because they are disclosed in the financial statements and result in an adverse audit opinion. Thus, *ICMW* is classified as a red flag.

Firm Characteristics

I include controls for variation in firm-specific characteristics. If the firm files a CTR in a quarterly or annual filing, all accounting variables are measured as of that filing. If the firm files a CTR associated with an 8-K filing, I measure accounting variables as of the previous quarter because this is the most recent accounting information available to the SEC when the CTR is received. I control for firm size using the natural log of total assets (*LOG_ASSETS*). I control for firm performance using return on assets (*ROA*), and an indicator variable equal to one if the firm reports negative cash flow from operations and equal to zero otherwise (*NEG_CF*). I include leverage equal to total debt divided by total assets (*DEBT_RATIO*) to control for the information

needs of both debt holders and investors who share claims on the firm with debt holders. To control for the quality of firms' external advisors and professionals, I include an indicator variable equal to one if the firm is audited by a Big 4 firms, and equal to zero otherwise (*BIGN*). Finally, to control for the extent of information search by outsiders, I include an indicator variable equal to one if any analysts followed the firm in 2008 per I/B/E/S and equal to zero otherwise (*FOLLOWING*). [16]

[16] I also consider the role of corporate governance if the extent of monitoring by outsiders influences the SEC's decisions to approve CTRs. Including corporate governance data from Board Analyst reduces the full sample to 607 observations and the 2008 sample to 267 observations. I include the percentage ownership by 5% block holders and indicator variables equal to one for firms with an independent audit committee and majority institutional ownership. These variables are not significant in the negative binomial regression although the percentage ownership by 5% block holders is positively associated with the odds of success ($p<0.05$). The inferences concerning other variables are generally consistent when controlling for these measures.

CHAPTER IV

EMPIRICAL RESULTS

Descriptive Statistics

Table 1, Panel A presents the sample selection and composition for the full population of approved CTRs and the sample of CTRs requested between 5/1/08 and 12/31/08. First, I identify 2,378 CT Order filings on EDGAR posted between 5/1/08 and 11/30/09. I exclude 419 extensions of previously approved CTRs, leaving a sample of 1,959 CTRs approved during this period. Of these, 33 CTRs were requested in 2005 or prior years and 58 were requested in 2006, indicating that these firms had relatively long duration to approval. In addition, 141 CTRs were requested in 2007 and not approved until at least 5/1/08. Finally, 988 CTRs were requested and approved in 2008 and 739 were requested and approved in 2009. The sample of CTRs requested between 5/1/08 and 11/30/09 consists of 939 approved CTRs for firms with available data in Compustat and CRSP to calculate all measures.

Table 1, Panel B presents descriptive evidence on the characteristics of approved CTRs and extensions during the sample period regardless of archival data availability. Of the new CTRs approved, 89 percent were approved without amendment or un-redaction. The mean number of exhibits redacted equals 1.8. 77 percent of CTRs were

TABLE 1

Descriptive statistics on confidential treatment requests

Panel A: Sample reconciliation

Approved CTRs filed on Edgar 5/1/08 - 11/30/09	
Approved CTRs	2,378
Less: Approved extensions of older CT Orders	-419
Total New CT Orders	1,959
CT Orders requested in 2005 and prior	33
CT Orders requested in 2006	58
CT Orders requested in 2007	141
CT Orders requested in 2008	988
CT Orders requested in 2009	739
	1,959
New CTRs requested 5/1/08 - 12/31/08	
Approved by 11/30/09	745
Less: Firms missing Compustat data	-166
Subtotal: Approved 2008 sample	579
Requested 5/1/08-12/31/08 but not approved by 11/30/09	64
Total 2008 Sample	645

Panel B: Descriptive Statistics on CTRs approved 5/1/08-11/30/09

	New CT Orders (n=1,959)		**Extensions Approved (n=419)**	
	Mean	**Count**	**Mean**	**Count**
SUCCESS	0.898	1,759	0.836	350
EXHIBIT_COUNT	1.811	3,547	1.470	616
Periodic Filing	0.766	1,501	0.603	253
Amended Filing	0.016	32	0.014	6
FORM_8K	0.187	366	0.105	44
FOREIGN_FILER	0.056	109	0.064	27
Registration Statement	0.037	72	0.251	105
Small (10KSB) filer	0.014	28	0.019	8
PROTECTION_PERIOD	3.949	n/a	5.13	n/a

(continued on next page)

TABLE 1 (continued)

Panel C: Duration to approval and protection period for CTRs with all available data approved 5/1/08-11/30/09

	Obs	Mean	Std Dev	25%	50%	75%	95%
MONTHS_TO_APPROVAL	1,004	1.376	1.746	0	1	2	5
PROTECTION_PERIOD	1,004	5.255	3.405	3	5	9	10

Panel D: Industry distribution of CTR firms approved 5/1/08-11/30/09 with available data to determine industry membership

Industry	New CT Orders	Extensions
Agriculture	0%	0%
Mining	1%	0%
Food	1%	1%
Textiles	2%	0%
Chemical	3%	2%
Pharmaceuticals	27%	40%
Extractive	1%	0%
Manufacturing	16%	19%
Transportation	10%	9%
Utilities	3%	0%
Retail	5%	6%
Services	9%	6%
Computers	17%	15%
Banking and Insurance	6%	2%
Totals	100%	100%
Observations	1,376	241

requested for material contracts filed on a periodic filing, 19 percent were requested on 8-K filings, and 6 percent were requested in conjunction with registration statements. In addition, 4 percent of firms receiving approved CTRs are foreign registrants and 1.4 percent are small filers.

Table 1, Panel C presents the duration of time required to approve a CTR in months. Mean *MONTHS_TO_APPROVAL* equals 1.37 months. The median *MONTHS_TO_APPROVAL* is 1 month, the 75th percentile equals 2 months, and the 95th percentile equals 5 months. These figures indicate that the majority of CTRs are approved within 2 months of submission. The mean *PROTECTION_PERIOD* equals 5.25 years, with a median of 5 years, 75th percentile of 9 years, and 95th percentile of 10 years, indicating significant variation in the length of the protection period. Table 1, Panel D presents the industry distribution of CTRs for firms with industry data in Compustat. Pharmaceuticals firms comprise the highest industry representation in the sample with 27 percent of approved CTRs, followed by Computers (17 percent), Manufacturing (16 percent), Transportation (10 percent), and Services (9 percent). All other industries comprise 5 percent or less of the sample.

Table 2 presents descriptive statistics for SOX 408 measures, proprietary costs, red flags, and CTR and firm characteristics. Mean *PE_RATIO* for firms in the sample equals -0.216, consistent with many firms in the sample reporting losses in 2007. Six percent of firms in the sample are in the highest decile of market value of equity (*HIGH_MVE*), and 25 percent of firms are categorized as *HIGH_VOLATILITY*. The mean Hirfindahl Index based on two digit SIC code equals 468, indicating that many firms operate in competitive industries.[17] In addition, *LOG_FIRMS* equals 7.21 and the mean number of operating segments (*SEGMENTS*) equals 3.63 (log equal to 1.025).

Finally, industry mean research and development expense (*IND_RD*)

[17] The Department of Justice merger guidelines list a Hirfindahl Index of 1000 as the threshold for review in horizontal mergers.

TABLE 2

Descriptive statistics

	Mean	StdDev	5%	25%	50%	75%	95%
Dependent Variables							
MONTHS_TO_APPROVAL	1.364	1.744	0.000	0.000	1.000	2.000	5.000
PROTECTION_PERIOD	5.480	3.211	0.784	2.745	4.899	9.430	9.932
SUCCESS	0.928	0.259	0.000	1.000	1.000	1.000	1.000
Section 408 Measures							
PE_RATIO	-0.216	8.349	-2.240	-0.269	-0.044	0.391	2.861
HIGH_MVE	0.063	0.243	0.000	0.000	0.000	0.000	1.000
HIGH_VOLATILITY	0.245	0.430	0.000	0.000	0.000	0.000	1.000
Proprietary Costs							
H-INDEX	467.994	383.207	186.566	261.871	340.415	480.555	1278.7
LOG_FIRMS	7.213	1.482	5.193	6.260	6.860	8.171	10.042
RD	-0.216	2.069	-2.615	-0.747	0.000	0.000	2.775
SEGMENTS	1.025	0.746	0.000	0.000	1.099	1.609	2.079
IND_RD	0.231	0.224	0.000	0.029	0.166	0.391	0.678
IND_CAPX	0.045	0.031	0.022	0.028	0.033	0.058	0.095
IND_ROA	-1.033	3.639	-1.887	-0.956	-0.686	-0.056	0.082
Red Flags							
SEC_INVESTIG	0.087	0.282	0.000	0.000	0.000	0.000	1.000
RESTATEMENT	0.319	0.467	0.000	0.000	0.000	1.000	1.000
ICMW	0.180	0.384	0.000	0.000	0.000	0.000	1.000
Firm Characteristics							
ROA	-0.085	0.243	-0.409	-0.096	-0.012	0.011	0.052
DEBT_RATIO	0.249	0.422	0.000	0.000	0.112	0.353	0.833
NEG_CF	0.502	0.500	0.000	0.000	1.000	1.000	1.000
BIGN	0.732	0.443	0.000	0.000	1.000	1.000	1.000
FORM_8K	0.159	0.366	0.000	0.000	0.000	0.000	1.000
FOREIGN_FILER	0.029	0.167	0.000	0.000	0.000	0.000	0.000
EXHIBIT_COUNT	1.711	1.452	1.000	1.000	1.000	2.000	5.000
FOLLOWING	0.656	0.475	0.000	0.000	1.000	1.000	1.000

Observations with available data equal 939 except for *HIGH_VOLATILITY* (n=875)
Refer to Appendix C for variable definitions.

TABLE 3

Negative binomial regression of the determinants of duration to CTR approval

	Predicted Sign	*MONTHS TO APPROVAL*	*MONTHS TO APPROVAL*
Section 408 Measures			
PE_RATIO	+	0.018***	0.021***
		(2.469)	(2.419)
HIGH_MVE	+	-0.267#	-0.265#
		(-1.901)	(-1.857)
HIGH_VOLATILITY	+		-0.132
			(-1.231)
Proprietary Costs			
RD	-	-0.004	-0.009
		(-0.196)	(-0.419)
LOG_FIRMS	+	0.047	0.044
		(1.270)	(1.092)
SEGMENTS	+/-	-0.054	-0.030
		(-0.793)	(-0.410)
IND_ROA	-	0.009	0.007
		(1.058)	(0.783)
IND_RD	-	0.080	0.085
		(0.353)	(0.354)
IND_CAPX	-	-0.959	-0.952
		(-0.678)	(-0.661)
Red Flags			
RESTATEMENT	+	-0.080	-0.091
		(-0.658)	(-0.712)
ICMW	+	0.223**	0.263**
		(1.775)	(2.054)
SEC_INVESTIG	+	0.359**	0.380**
		(2.143)	(2.151)
Firm Characteristics			
FOREIGN_FILER		0.053	0.115
		(0.242)	(0.491)
FORM_8-K		0.095	0.064
		(0.833)	(0.507)
ROA		0.281*	0.368
		(1.654)	(1.521)
DEBT_RATIO		0.112	0.055
		(1.163)	(0.495)
NEG_CFO		-0.095	-0.057
		(-0.978)	(-0.558)

(continued on next page)

TABLE 3 (continued)

	Predicted Sign	*MONTHS TO APPROVAL*	*MONTHS TO APPROVAL*
BIGN		0.144	0.176
		(1.357)	(1.564)
FOLLOWING		-0.110	-0.051
		(-1.116)	(-0.485)
EXHIBIT_COUNT		0.028	0.023
		(1.341)	(1.052)
Constant		0.190	0.170
		(0.496)	(0.412)
LnAlpha		-0.664***	-0.666***
		(-4.562)	(-4.400)
Observations		939	875

*** p<0.01, ** p<0.05, * p<0.10 based on two tailed tests unless indicated by a sign prediction.
Standard errors are clustered by firm.
Models include year and quarter indicators.
See Appendix C for variable definitions.

equals -0.21, industry mean capital expenditures (*IND_CAPX*) equal 0.05, and industry mean ROA (*IND_ROA*) equals -1.033. Eight percent of CTRs are filed by firms that have been investigated the SEC, 31 percent are filed by firms that have reported a restatement in prior years, and 18 percent are filed by firms that have reported material weaknesses. Mean debt ratio equals 0.25 and 50 percent of firms reported negative operating cash flows (*NEG_CF*), consistent with the adverse economic conditions present in 2008 and 2009. Finally 73 percent of firms retain a Big N auditor, indicating that the majority of firms requesting CTRs invest in high quality external professional services.

Multivariate Analysis

Duration to Approval

Table 3 presents results from the negative binomial regression of months to CTR approval. Hypothesis 1a predicts that firms requiring greater monitoring under SOX 408 have significantly longer duration to approval. The coefficient for *PE_RATIO* is positive and significant ($p<0.01$), however *HIGH_MVE* has negative coefficient ($p<0.10$), and *HIGH_VOLATILITY* and *RESTATEMENT* are not significant in this model. Hypothesis 2a predicts that proprietary costs are associated with duration to approval. I find little support for this hypothesis, suggesting that the SEC's decisions to apply greater scrutiny to or comment on a firm's application for confidential treatment have little association with the nature of product market competition or proprietary costs faced by the registrant. Finally, Hypothesis 3a predicts that firms exhibiting red flags have significantly longer duration to approval. Firms disclosing material weaknesses (*ICMW*, $p<0.05$) and firms previously investigated by the SEC (*SEC_INVETIG*, $p<0.05$) have significantly longer approval times than firms without these red flags, supporting Hypothesis 4a. These findings suggest that the SEC applies greater scrutiny to firms requiring greater monitoring under SOX 408 and to firms exhibiting red flags but that proprietary costs have little association with duration to approval.

Duration of the Protection Period

Table 4 presents the results from estimating a negative binomial regression examining the influence of the SOX 408 criteria, proprietary costs, and red flags on the protection period. Hypothesis 2a proposes that the SEC grants shorter protection periods to firms requiring greater monitoring under SOX 408, Hypothesis 2b proposes that the SEC grants longer protection periods to firms with high proprietary costs, and Hypothesis 4b proposes that firms exhibiting red flags receiving shorter protection periods. Most SOX 408 measures are not significant in this model, however the coefficient on *HIGH_MVE* is positive and significant ($p<0.05$) contrary to predictions, indicating that the largest firms receive longer protection periods. In addition, red flag measures are not significantly associated with the protection period.

I find substantial support for Hypothesis 2b predicting an association between proprietary costs and the protection period. I find a negative association between industry concentration (*LOG_FIRMS*, $p<0.05$) and the protection period, suggesting that firms operating in more competitive industries have lower proprietary costs. The coefficient for operating segments is negative and significant (*SEGMENTS*, $p<0.10$), consistent with firms reporting fewer operating segments having greater proprietary costs to disclosure. Finally, industry research and development expense (*IND_RD*, $p<0.01$) and capital expenditures (*IND_CAPX*, $p<0.01$) are positively associated with the protection period, suggesting that firms in industries with greater barriers to entry document stronger claims of proprietary costs. Overall, these findings suggest that the SEC's decisions as to the duration of the protection period are determined primarily

TABLE 4

Negative binomial regression of determinants of the protection period

	Predicted Sign	*PROTECTION PERIOD*	*PROTECTION PERIOD*
Section 408 Measures			
PE_RATIO	-	-0.000	0.001
		(-0.032)	(0.450)
HIGH_MVE	-	0.207##	0.208##
		(2.274)	(2.286)
HIGH_VOLATILITY	-		0.005
			(0.105)
Proprietary Costs			
RD	+	-0.010	-0.015
		(-0.782)	(-1.152)
LOG_FIRMS	-	-0.039**	-0.036*
		(-2.163)	(-1.852)
SEGMENTS	+/-	-0.070*	-0.093**
		(-1.955)	(-2.541)
IND_ROA	+	-0.002	-0.001
		(-0.480)	(-0.301)
IND_RD	+	0.447***	0.419***
		(3.463)	(3.150)
IND_CAPX	+	2.830***	2.915***
		(3.863)	(3.896)
Red Flags			
RESTATEMENT	-	-0.002	-0.042
		(-0.039)	(-0.633)
ICMW	-	0.002	0.023
		(0.031)	(0.328)
SEC_INVESTIG	-	-0.021	0.037
		(-0.214)	(0.368)
Firm Characteristics			
FOREIGN_FILER		0.285***	0.278***
		(3.014)	(2.855)
FORM_8-K		0.092*	0.059
		(1.657)	(0.970)
ROA		-0.018	-0.101
		(-0.152)	(-0.744)
DEBT_RATIO		0.025	0.017
		(0.430)	(0.225)
NEG_CFO		-0.025	-0.055
		(-0.450)	(-0.979)

(continued on next page)

TABLE 4 (continued)

	Predicted Sign	*PROTECTION PERIOD*	*PROTECTION PERIOD*
BIGN		0.015	0.012
		(0.239)	(0.189)
FOLLOWING		-0.017	-0.031
		(-0.291)	(-0.507)
EXHIBIT_COUNT		0.052***	0.054***
		(4.338)	(4.509)
Constant		1.749***	1.803***
		(10.591)	(10.346)
lnAlpha		-1.834***	-1.914***
		(-16.498)	(-15.678)
Observations		939	875

*** p<0.01, ** p<0.05, * p<0.10 based on two tailed tests unless indicated by a sign prediction.
Standard errors are clustered by firm.
Models include year and quarter indicators.
See Appendix C for variable definitions.

by proprietary costs and not the public interest in promoting disclosure or the threat of legislative oversight.

Probability of Successful Redaction

Table 5 presents the results of estimating a logistic regression on the probability of successfully obtaining CTR approval, without un-redacting previously withheld information. Hypothesis 3a predicts that firms requiring greater monitoring under SOX 408 have lower odds of success, Hypothesis 3b proposes that firms with low proprietary costs have lower odds of success, and Hypothesis 4c predicts that firms exhibiting red flags have lower odds of success. The coefficients on *PE_RATIO* ($p<0.05$) and *HIGH_VOLATILITY* ($p<0.05$) are negative and significant, indicating that firms posing greater disclosure risk to investors have lower odds of successful redaction. Proprietary costs generally are not significant predictors of success. Finally, firms disclosing restatements in prior years (*RESTATEMENT*, $p<0.10$) and firms disclosing material weaknesses in prior years (*ICMW*, $p<0.05$) have significantly higher odds of success, inconsistent with H4c. These findings suggest that firms exhibiting red flags are more likely to redact only eligible information from material contract filings. Although my tests cannot identify the underlying cause for these findings, it is possible that firms with low financial reporting quality make disclosure decisions to avoid further erosion of their financial reporting quality.

TABLE 5

Logistic regression on the probability of successful redaction

	Predicted Sign	*SUCCESS*	*SUCCESS*
Section 408 Measures			
PE_RATIO	-	-0.059**	-0.038
		(-2.184)	(-1.026)
HIGH_MVE	-	0.569	0.474
		(0.603)	(0.571)
HIGH_VOLATILITY	-		-0.634**
			(-1.712)
Proprietary Costs			
RD	+	0.059	0.023
		(0.839)	(0.246)
LOG_FIRMS	-	-0.178*	-0.171*
		(-1.597)	(-1.506)
SEGMENTS	+	-0.110	-0.180
		(-0.469)	(-0.686)
IND_ROA	+	0.034	0.034
		(1.146)	(1.194)
IND_RD	+	0.818	0.506
		(0.784)	(0.453)
IND_CAPX	+	-2.034	-2.853
		(-0.400)	(-0.493)
Red Flags			
RESTATEMENT	-	0.597#	0.595
		(1.679)	(1.465)
ICMW	-	1.135##	1.185#
		(2.046)	(1.930)
SEC_INVESTIG	-	-0.237	0.040
		(-0.355)	(0.051)
Firm Characteristics			
FOREIGN_FILER		-1.233**	-1.622**
		(-1.967)	(-2.558)
FORM_8-K		-0.613	-0.994**
		(-1.557)	(-2.370)
ROA		1.658***	1.652**
		(3.378)	(2.498)
DEBT_RATIO		0.377	0.341
		(1.183)	(0.784)
NEG_CFO		0.355	0.193
		(0.966)	(0.497)

(continued on next page)

TABLE 5 (continued)

	Predicted Sign	*SUCCESS*	*SUCCESS*
BIGN		0.409	0.069
		(1.149)	(0.163)
FOLLOWING		0.340	0.282
		(1.102)	(0.758)
EXHIBIT_COUNT		-0.207***	-0.169**
		(-2.732)	(-2.157)
MONTHS_TO_APPROVAL		-0.508***	-0.504***
		(-6.359)	(-6.142)
Constant		4.238***	4.987***
		(3.094)	(3.358)
Observations		939	875
ROC		0.873	0.869

*** p<0.01, ** p<0.05, * p<0.10 based on two tailed tests unless indicated by a sign prediction.
Standard errors are clustered by firm.
Models include year and quarter indicators.
See Appendix C for variable definitions.

The results from Tables 3, 4, and 5 indicate that proprietary costs influence the duration of time the SEC agrees to protect information from disclosure, but proprietary costs do not influence the amount of scrutiny the SEC applies to firms nor do they influence the success of the request. In addition, the SEC incorporates the public interest in promoting disclosure to investors when reviewing CTRs as firms requiring greater monitoring under SOX 408 have longer duration to approval (*PE_RATIO*) and lower odds of success (*PE_RATIO* and *HIGH_VOLATILITY*). Finally, the SEC applies greater scrutiny to firms with red flags although red flag firms have higher odds of success. Taken together, this pattern indicates that the SEC applies greater scrutiny (perceives greater risk) to firms with red flags even though red flag firms are less likely to make ineligible redactions than other firms. These findings are consistent with the SEC incorporating different aspects of the public interest when reviewing regulatory

exemptions and with the SEC reviewing CTRs to reduce the threat of legislative oversight because the SEC devotes additional resources to reviewing CTRs that are more likely to qualify for confidential treatment.

Analysis on 2008 Sample and Hazard Model

The sample of approved CTRs filed on EDGAR excludes CTRs that were requested but have not yet been approved by the SEC. To avoid excluding CTRs pending approval, I search material contract filings between 5/1/08 and 12/31/08 to identify redactions. I then match redacted exhibits to CT Orders approved through November 30, 2009 to construct a sample of all CTRs requested between May 2008 and December 2008 (hereafter, the 2008 sample). The 2008 sample consists of 579 approved CTRs and 64 CTRs that have not been approved as of November 30, 2009. I also verify that unapproved CTRs were not withdrawn by the registrant by searching the explanations for subsequent amended filings.

I also examine the material contract filings associated with the CTR to determine the nature of the information redacted and categorize the contracts. I restrict this sample to the 2008 sample to limit the data collection. I set a series of indicator variables equal to one if the material contract concerns a credit agreement, a security interest, a litigation settlement, an executive compensation contract, an executive severance agreement, a procurement agreement between a buyer and seller, a contract to purchase or lease equipment or property, a stock transaction agreement, an agreement for outside professional services, a research and development partnership agreement, a licensing agreement, and a merger or acquisition agreement.

Table 6 presents descriptive and univariate statistics for the 2008 sample. Table 6, Panel A presents descriptive statistics for the nature of the redacted material contract. 42 percent of approved CTRs were requested for Supplier/Customer contracts, 32 percent of redacted contracts were licensing agreements, 17 percent of redacted contracts were equipment purchases or material leasing agreements, and 12 percent of redacted contracts were research and development partnerships. Other contract types each comprised less than 10 percent of approved CTRs. Among pending CTRs, 31 percent of redacted contracts are credit agreements, 30 percent are stock transactions, 18 percent are licensing agreements, 14 percent are supplier agreements, and the remaining categories constitute less than 10 percent of redactions pending approval. In Table 6, Panel B, the mean number of exhibits redacted is similar between approved (1.60 exhibits) and pending CTRs (1.32 exhibits). Finally, the mean days to approval for the 2008 sample equals 64.7 and the mean days to right censor equals 414.2.

TABLE 6

Descriptive statistics for 2008 CTR requests

Panel A: Descriptive statistics for contract types of CTRs requested in 2008 sample

	Approved CT Order		Pending CT Order	
Contract Type Redacted	**N**	**Mean**	**N**	**Mean**
Credit Agreement	536	9%	64	31%
Security Interest	536	1%	64	0%
Lawsuit	536	2%	64	3%
Compensation Contract	536	8%	64	9%
Executive Severance	536	1%	64	6%
Supplier/Customer	536	42%	64	14%
Equipment/Lease	536	17%	64	8%
Stock Transactions	536	8%	64	30%
Outside Services	536	10%	64	2%
R&D	536	12%	64	6%
Licensing	536	32%	64	18%
Merger/Acq	536	2%	64	0%
Other	536	2%	64	0%

Panel B: Duration to approval, protection period and number of exhibits redacted for 2008 sample

	N	**Mean**	**SD**	**25%**	**50%**	**75%**	**95%**
Days to Approval	536	64.72	61.75	28	42	78	185
Days to Censor	64	414.2	135.39	360	438	521	570
Protection Period	536	5.04	3.53	2	5	9	10

	N	**Mean**	**SD**	**25%**	**50%**	**75%**	**95%**
# Exhibits Redacted	536	1.60	1.32	1	1	2	4
# Exhibits Requested	64	1.32	86.53	1	1	2	3

(continued on next page)

TABLE 6 (continued)

Panel C: Univariate tests of mean differences between approved and pending CTRs

	Approved CTR			Pending CTR			
	N	**Mean**	**SD**	**N**	**Mean**	**SD**	**T Stat**
Dependent Variables							
DURATION	536	64.726	61.750	59	414.220	135.394	**35.22**
PROECTECTION_PERIOD	536	5.533	3.244	n/a	n/a	n/a	n/a
SUCCESS	536	0.946	0.226	n/a	n/a	n/a	n/a
Section 408 Measures							
HIGH_MVE	536	0.116	0.320	59	0.559	0.501	**9.45**
PE_RATIO	508	-0.086	6.464	26	6.084	30.988	**3.33**
BETA	479	0.263	0.441	0	0	n/a	n/a
Proprietary Costs							
H_INDEX SIC	536	469.14	369.21	58	398.410	231.84	1.42
LOG_FIRMS	536	7.327	1.540	59	7.858	1.839	**2.46**
RD	536	-0.198	1.923	59	-0.135	0.662	0.25
SEGMENTS	536	0.950	0.761	59	0.451	0.735	**4.79**
IND_RD	536	0.246	0.354	59	0.139	0.411	**2.16**
IND_CAPX	536	0.045	0.030	59	0.086	0.075	**7.93**
IND_ROA	536	-0.806	1.976	59	-0.975	2.592	0.60
Red Flags							
SEC_INVESTIG	536	0.080	0.272	59	0.017	0.130	1.76
RESTATEMENT	536	0.323	0.468	59	0.339	0.477	0.25
ICMW	536	0.177	0.382	59	0.339	0.477	**3.00**
Firm Characteristics							
ROA	535	-0.082	0.220	55	-0.049	0.657	0.81
DEBT_RATIO	536	0.257	0.415	59	7.618	54.621	**3.14**
LOSS	536	0.593	0.492	59	0.424	0.498	**2.51**
NEG_CF	536	0.494	0.500	59	0.271	0.448	**3.28**
BIGN	536	0.731	0.444	58	0.569	0.500	**2.61**
EXHIBIT_COUNT	536	1.601	1.296	59	1.305	0.650	1.72
FOLLOWING	536	0.601	0.490	59	0.203	0.406	**6.00**
FOREIGN_FILER	536	0.030	0.170	59	0.102	0.305	**2.78**
FORM_8K	536	0.168	0.374	59	0.305	0.464	**2.60**

See Appendix C for variable definitions.
Bold indicates significant at $p<0.05$.

Table 6, Panel C presents univariate differences between the approved and pending CTRs. Firms receiving approval have significantly smaller disparities in the P/E Ratios (*PE_RATIO*, $p<0.01$). The mean for *HIGH_MVE* among approved firms (11%) is proportional to the Compustat universe, however 56% of pending CTRs are in the highest decile of market value of equity. As compared to pending CTR applications, approved CTR firms operate in more concentrated industries (*LOG_FIRMS*, $p<0.05$), report more operating segments (*SEGMENTS*, $p<0.01$), report significant higher research and development expenditures (*IND_RD*, $p<0.05$) and significantly lower capital expenditures *(IND_CAPX*, $p<0.01$). Approved firms have lower debt ratios (*DEBT_RATIO*, $p<0.01$), are more likely to report a loss (LOSS, $p<0.01$) and negative operating cash flow (*NEG_CF*, $p<0.01$), and are more likely to retain a Big N auditor (*BIGN*, $p<0.05$). There are no significant differences between groups for *ROA* or *EXHIBIT_COUNT*. Firms with unapproved CTRs are significantly more likely to have reported a material weakness (*ICMW*, $p<0.01$).

Table 7 presents multivariate evidence examining the SEC's approval decisions, controlling for the nature of the redacted contract. First, I perform a duration analysis on the 2008 sample using both approved and unapproved CTRs to determine whether the inferences from Table 3 are sensitive to the exclusion of CTRs pending approval.

TABLE 7

Multivariate analysis examining firms requesting confidential treatment in 2008

Panel A: Duration to approval or right censor using a Cox proportional hazard model

	Predicted Sign	Days to Approval or Right Censor
Section 408 Measures		
PE_RATIO	-	-0.031***
		(-9.065)
HIGH_MVE	-	0.318**
		(2.113)
Proprietary Costs		
RD	+	0.041**
		(1.969)
LOG_FIRMS	+/-	0.050
		(0.677)
SEGMENTS	+	-0.000
		(-0.009)
IND_ROA	+	0.039
		(0.189)
IND_RD	+	0.003
		(0.119)
IND_CAPX	+	3.911**
		(1.887)
Red Flags		
RESTATEMENT	-	-0.019
		(-0.147)
ICMW	-	-0.089
		(-0.652)
SEC_INVESTIG	-	-0.316**
		(-1.808)
Firm and CTR Controls		Yes
Contract Type		Yes
Year and Quarter		Yes
Observations		533

***p<0.01, **p<0.05, *p<0.10 based on two tailed tests unless indicated by sign prediction.
Standard errors are clustered by firm.
See Appendix C for variable definitions.

(continued on next page)

TABLE 7 (continued)

Panel B: Multivariate analysis examining the association between contract type and CTR decisions

	DAYS_TO_APPROVAL	*PROTECTION_PERIOD*	*SUCCESS*
Credit Agreement	-0.188	-0.080	1.733*
	(-1.255)	(-0.708)	(1.839)
Executive Compensation	0.058	-0.287**	0.503
	(0.438)	(-2.326)	(0.564)
Severance Agreement	0.517***	-0.158	*a*
	(3.157)	(-1.080)	
Purchasing/Supplier	0.057	0.003	-0.062
	(0.822)	(0.055)	(-0.169)
Equipment or Lease	-0.002	0.117**	-0.062
	(-0.024)	(1.964)	(0.169)
Licensing	-0.072	0.116**	0.140
	(-0.845)	(2.460)	(0.409)
R&D Partnership	-0.008	0.170**	0.548
	(-0.063)	(2.501)	(0.605)
Outside Professional Services	0.350	0.120	0.095
	(1.508)	(1.039)	(0.155)
Stock Transaction	0.052	-0.117	-0.516
	(0.328)	(-1.325)	(0.990)
SOX 408 Measures	Yes	Yes	Yes
Proprietary Costs	Yes	Yes	Yes
Red Flags	Yes	Yes	Yes
Firm and CTR Controls	Yes	Yes	Yes
Quarter Indicators	Yes	Yes	Yes
Observations	534	534	503

a Variable omitted due to perfect predictor of success.
***p<0.01, **p<0.05, *p<0.10 based on two tailed tests unless indicated by sign prediction.
Standard errors are clustered by firm.
See Appendix C for variable definitions.

This test also incorporates the type of contract in the analysis. I use a Cox proportional hazard model to examine the conditional probability of a CTR being approved at time t+d given that approval has not taken place at time t.[18] For unapproved CTRs, I calculate the days to right censor equal to the difference between the filing date and either 11/30/09, the date of the last filing in EDGAR (if before 11/30/09), or the date the registrant indicates in an SEC filing that they are ceasing operations. I estimate the following model using days between request and approval or right censor (Model 4):

$$h(t)=a(t)\exp(\alpha + \beta_{1\text{-}3}\text{Section 408}_n + \beta_{4\text{-}9}\text{Proprietary Costs}_n + \beta_{10\text{-}12}\text{Red Flags}_n + \beta_{13\text{-}20}\text{Firm and CTR Controls}_n + \beta_{24\text{-}36}\text{Contract Type}_n)$$

Where a(t) is the function of time and:

h(t) = (probability of approval between time t and time t + d) / d(probability of approval after time t)

This model includes indicator variables for quarter and I cluster the standard errors by firm to control for time-series correlation. The results of this model are presented in Table 7, Panel A. The inferences are generally consistent with those reported in Table 3. Specifically, the coefficients for the P/E Ratio (*PE_RATIO*, $p<0.01$) and SEC Investigations (*SEC_INVESTIG*, $p<0.05$) are negative and significant, indicating lower odds of approval at a point in time, hence, longer review periods. Again, proprietary costs are not significant determinants of duration to approval. Table 7, Panel B presents coefficient estimates for the nature of information redacted based on

[18] The proportional hazard model is advantageous in that it does not require specification of the functional form of time (Alison 1984). I perform supplemental tests to confirm that the proportional hazard assumption is satisfied.

the type of underlying contract. Column 1 reports results for the duration analysis and indicates that contract type generally is not a significant determinant of duration to approval. Column 2 reports results for the protection period. The coefficient for compensation contracts is negative and significant ($p<0.05$), suggesting significantly shorter protection periods however this finding may be due to compensation contracts have shorter terms than long-term contracts. The positive and significant coefficients for research and development partnerships ($p<0.05$), licensing agreements ($p<0.05$), and equipment or lease transactions ($p<0.05$) indicate longer protection periods, suggesting that the SEC views these contracts as imposing greater proprietary costs to disclosure. Finally, Column 3 presents coefficient estimates for the odds of success. Generally, contract type is not associated with the odds of success. Overall, these findings suggest that the nature of the underlying contract influences the SEC's decisions concerning the duration of protection, but not the scrutiny applied to a CTR or the eligibility of the redacted information.

Selection Bias

I consider two potential sources of selection bias. First, firms' decisions to request confidential treatment may not arise randomly across firms. Second, firms may choose to file a material contract on an 8-K versus a periodic filing because the time required to prepare CTRs may exceed the statutory four day filing requirement for 8-Ks. Thus, CTRs filed within the narrow window may differ systematically in complexity or the expertise of legal counsel from other CTRs.

TABLE 8

Selection model for firms' decisions to redact from SEC filings

Panel A: Univariate statistics for redacting versus non-redacting firms (2007 data)

	REDACT=0			*REDACT*=1			
	N	**Mean**	**SD**	**N**	**Mean**	**SD**	**T Stat**
VW Determinants							
EQUITY_ISSUE	6100	0.038	0.191	754	0.055	0.229	2.31
DEBT_ISSUE	6100	0.485	0.499	754	0.408	0.491	3.99
ROA	6100	-0.28	1.353	754	-0.23	0.839	0.97
LOSS	6100	0.346	0.475	754	0.527	0.499	9.8
PENSION	6100	5.75	2.822	754	4.676	2.237	0.68
H_INDEX	6100	0.274	0.266	754	0.239	0.234	3.47
#CONTRACTS	6100	32.42	20.84	754	39.27	18.95	8.59
Additional Firm Characteristics							
SEGMENTS	6100	1.595	0.944	754	1.694	0.778	2.76
FOREIGN_OP	6100	0.300	0.458	754	0.34	0.474	2.28
PENSION	6100	0.663	0.472	754	0.689	0.462	1.43
DIVIDENDS	6100	0.029	0.169	754	0.022	0.148	1.07
BIGN	6100	0.594	0.491	754	0.708	0.454	6.02
NEG_CF	6100	0.274	0.446	754	0.406	0.491	7.56
INTANGIBLES	6100	0.101	0.174	754	0.115	0.176	2.08
CAPX	6100	0.219	0.256	754	0.189	0.216	3.08
RD	6100	0.051	0.144	754	0.137	0.221	14.4
#FOLLOWING	6100	3.982	5.677	754	5.271	0.224	5.82
Proprietary Costs							
LOG_FIRMS	5352	8.086	2.033	699	7.301	1.596	9.8
%COMPUSTAT	5352	0.045	0.079	699	0.103	0.121	16.7
IND_RD	5352	0.121	0.337	699	0.244	0.378	8.94
IND_CAPX	5352	0.052	0.054	699	0.045	0.035	2.97
IND_PPE	5352	0.221	0.215	691	0.19	0.171	3.56
IND_ROA	5318	-0.66	2.02	691	-0.09	2.304	3.12
Red Flags							
RESTATEMENT 2008	6100	0.062	0.241	754	0.079	0.271	1.82
WELLS 2008	6100	0.005	0.071	754	0.016	0.125	3.56
ICMW 2007	6100	0.101	0.641	754	0.172	0.786	2.81

Refer to Appendix C for variable definitions

(continued on next page)

TABLE 8 (continued)

Panel B: Replication of Verrecchia and Weber (2006) determinants of redaction decision

	All Firms	Smallest 25%	Smallest 10%
	REDACT	***REDACT***	***REDACT***
EQUITY_ISSUE	0.163*	0.598**	*a*
	(1.672)	(2.435)	
DEBT_ISSUE	-0.194***	-0.264**	0.041
	(-4.424)	(-2.554)	(0.207)
H_INDEX (SIC)	-0.226***	-0.438**	-0.756*
	(-2.685)	(-2.381)	(-1.858)
ROA	0.070***	-0.063**	-0.049
	(3.085)	(-1.984)	(-1.241)
LOSS	0.478***	0.461***	0.121
	(9.990)	(3.752)	(0.403)
LOG_ASSETS	0.009	0.264***	0.253**
	(0.809)	(5.162)	(2.227)
# CONTRACTS	0.007***	0.016***	0.016**
	(8.026)	(5.355)	(2.368)
Constant	-1.577***	-2.634***	-2.266***
	(-20.423)	(-13.346)	(-6.967)
Observations	6854	1694	660
Pseudo R-squared	0.044	0.130	0.092
ROC	0.667	0.773	0.758

a Variable omitted as a perfect predictor of success
***p<0.01, **p<0.05, *p<0.10 based on two tailed tests unless indicated by sign prediction.
Standard errors are clustered by firm.
See Appendix C for variable definitions.

(continued on the next page)

TABLE 8 (continued)

Panel C: Additional firm and industry level characteristics on the decision to redact information from an SEC filing

	All Firms	Smallest 25%	Smallest 10%
	REDACT	***REDACT***	***REDACT***
EQUITY_ISSUE	0.200	0.199	a
	(1.628)	(0.472)	
DEBT_ISSUE	-0.166***	-0.261**	0.047
	(-3.188)	(-2.279)	(0.214)
ROA	0.088***	-0.036	-0.045
	(3.363)	(-1.025)	(-0.991)
LOSS	0.379***	0.472***	0.034
	(6.624)	(3.288)	(0.106)
LOG_ASSETS	-0.012	0.224***	0.251*
	(-0.752)	(3.754)	(1.955)
SEGMENTS	-0.016	-0.046	-0.035
	(-0.475)	(-0.640)	(-0.219)
FOREIGN_OP	0.100	-0.168	a
	(1.624)	(-0.936)	
PENSION	0.056	0.084	-0.216
	(0.987)	(0.789)	(-0.790)
DIVIDENDS	-0.047	a	a
	(-0.218)		
BIGN	0.241***	0.142	-0.699
	(3.859)	(1.168)	(-1.450)
# CONTRACTS	0.007***	0.016***	0.013
	(6.815)	(4.708)	(1.525)
LOG_FIRMS	-0.049***	-0.001	0.138*
	(-2.950)	(-0.026)	(1.762)
%PUBLIC	2.083***	1.814***	2.677**
	(7.357)	(3.415)	(2.436)
IND_ROA	-0.033***	0.004	0.244
	(-3.018)	(0.119)	(1.460)
IND_RD	0.083	-0.127	0.199
	(1.284)	(-0.879)	(0.577)
IND_CAPX	-2.029***	-4.657***	-5.258
	(-3.552)	(-2.914)	(-1.316)
Constant	-1.363***	-2.513***	-3.036***
	(-7.569)	(-6.301)	(-3.768)
Observations	5165	1412	520
Pseudo R-squared	0.103	0.158	0.126
ROC	0.732	0.787	0.792

a Variable omitted as a perfect predictor of success
***p<0.01, **p<0.05, *p<0.10 based on two tailed tests unless indicated by sign prediction.
Standard errors are clustered by firm.
See Appendix C for variable definitions.

(Continued on next page)

TABLE 8 (continued)

Panel D: Main analysis controlling for firm's selection decision to request confidential treatment

	MONTHS TO APPROVAL	*PROTECTION PERIOD*	*SUCCESS*
Inverse Mills Ratios			
IMR – REDACT	0.160	-0.135	0.761
	(0.619)	(-1.047)	(0.932)
Section 408 Measures			
PE_RATIO	0.021**	0.001	-0.039
	(2.415)	(0.459)	(-1.012)
HIGH_MVE	-0.282*	0.224**	0.376
	(-1.936)	(2.406)	(0.451)
HIGH_VOLATILITY	-0.123	-0.003	-0.579
	(-1.152)	(-0.057)	(-1.580)
Proprietary Costs			
RD	-0.009	-0.015	0.026
	(-0.402)	(-1.145)	(0.278)
LOG_FIRMS	0.044	-0.036*	-0.177
	(1.105)	(-1.863)	(-1.520)
SEGMENTS	-0.029	-0.093**	-0.168
	(-0.397)	(-2.547)	(-0.633)
IND_ROA	0.007	-0.001	0.035
	(0.829)	(-0.291)	(1.332)
IND_RD	0.132	0.383***	0.721
	(0.518)	(2.723)	(0.616)
IND_CAPX	-1.023	2.985***	-3.377
	(-0.709)	(4.009)	(-0.572)
Red Flags			
RESTATEMENT	-0.096	-0.038	0.577
	(-0.747)	(-0.585)	(1.421)
ICMW	0.270**	0.018	1.220**
	(2.108)	(0.257)	(1.983)
SEC_INVESTIG	0.385**	0.035	0.047
	(2.170)	(0.350)	(0.059)
Firm and CTR Controls	Yes	Yes	Yes
Year and Quarter Indicators	Yes	Yes	Yes
LnAlpha	-0.667***	-1.918***	n/a
	(-4.403)	(-15.610)	
Observations	875	875	875

***p<0.01, **p<0.05, *p<0.10 based on two tailed tests unless indicated by sign prediction.
Standard errors are clustered by firm.
See Appendix C for variable definitions

To address whether the decision to request confidential treatment is a potential source of selection bias, I build upon Verrecchia and Weber's (2006) selection model for firms' decisions to request CTRs. I classify a firm as redacting information if an approved CTR indicates an initial filing date in FY 2008 or 2009 or if the firm filed a CTR between 5/1/08 and 12/31/08 and had not secured approval as of 11/30/09. I assume that all other firms did not request confidential treatment during this period.[19] I include the determinants of redaction decisions from Verrecchia and Weber (2006) as follows: an indicator variable equal to one if the firm issued equity during 2008 per SDC and equal to zero otherwise (*EQUITY_ISSUE*); an indicator variable equal to one if the sum of total short term and total long term debt increased between FY 2007 and FY 2008 and equal to zero otherwise (*DEBT_ISSUE*); a Hirfindahl Index of industry concentration equal to the sum of the squared market share (firm total revenue/industry total revenue) by two digit SIC code at the end of 2007 (*H_INDEX SIC*); and the number of material contracts filed by the registrant during 2008 by summing the number of Exhibit 10 filings in EDGAR per CIK (*#CONTRACTS*).[20] Finally, I include *LOG_ASSETS*, *ROA*, and *LOSS* as of the end of 2007 as previously defined.

Table 8, Panel A reports descriptive and univariate statistics comparing redacting firms to non-redacting firms with available data in Compustat. Firms that redact are more likely to issue equity (*EQUITY_ISSUE*, $p<0.05$) and less likely to issue debt

[19] This assumption does not hold for firms that filed a CTR in 2008 and secured approval for the CTR prior to 5/1/08. However, incorrectly classifying firms as non-redactors reduces the power of my tests.

[20] Data were obtained by extracting keywords patterned on "EX 10" and "Exhibit 10" from the metadata headers in EDGAR filings during 2008. The number of material contract filings will be incorrect for firms with nonstandard or incorrect header fields.

(*DEBT_ISSUE*, p<0.01) than firms that do not redact. Redacting firms are more likely to report a loss in 2007 (*LOSS*, p<0.01), file material contracts more frequently (*#CONTRACTS*, p<0.01), report a higher number of operating segments (*SEGMENTS*, p<0.01), and are more likely to report foreign operations (*FOREIGN*, p<0.05). Redacting firms are more likely to hire a Big N auditor (*BIGN*, p<0.01), more likely to report negative cash flow from operations (*NEG_CF*, p<0.01), report higher intangibles (*INTANGIBLE*, p<0.05) and research and development expense (*FIRM_RD*, p<0.01), and have higher analyst following (*#FOLLOWING*, p<0.01). Finally, redacting firms are more likely to report red flag events such as restatements (*RESTATEMENT*, p<0.10), material weaknesses (*ICMW*, p<0.01) and receipt of a Wells Notice in 2008 (*WELLS*, p<0.01). Overall, these univariate tests suggest significant differences between redacting and non-redacting firms, including differences in firm performance, firm complexity, industry composition, and financial reporting quality.

Table 8, Panel B presents coefficient estimates for Verrecchia and Weber's (VW's) selection model applied to firms in 2007. I find that VW's determinants have adequate discriminate ability for the redaction decisions among the smallest twenty-five percent of firms in my sample (ROC = 0.773, pseudo R-squared=0.13) but these variables have low discriminate ability for redaction decisions in the full sample of Compustat firms (ROC=0.667, pseudo R-squared equal to 0.044). This result is not surprising given that VW examine only small firms (market value of equity between $50 million and $100 million in 2001). To increase the explanatory power of the model including larger firms, I include several additional variables to control for firms'

complexity, proprietary costs, industry characteristics, and the quality of the firm's information environment. I include proprietary cost variables as described previously (*IND_CAPX*, *IND_RD*, *SEGMENTS*, *IND_ROA*, and *LOG_FIRMS*), an indicator variable equal to one if the firm reports foreign income (*FOREIGN_OP*), an indicator variable equal to one if the firm is audited by a Big N firm (*BIGN*), an indicator variable equal to one if the firm reports pension assets and liabilities in Compustat (*PENSION*), and an indicator variable equal to one if the firm paid dividends in 2007 and equal to zero otherwise (*DIVIDENDS*). These results are tabulated in Table 6, Panel C. Including these additional variables improves model fit for the full sample to an acceptable level (ROC=0.732) (Hosmer and Lemeshow 1980).

Table 8, Panel D presents coefficient estimates for Model 1, Model 2, and Model 3 including the Inverse Mills Ratio from using Table 8, Panel C column 1 as the first stage to a Heckman MLE selection model. The coefficient estimates indicate consistent inferences concerning the association between red flags and proprietary costs and CTR decisions as reported in Tables 3-5 when controlling for firms' choices to request confidential treatment. In addition, the Inverse Mills Ratio is not statistically significant (*IMR-REDACT*), suggesting that firms' decisions to redact are not associated with the SEC's decisions to approve CTRs.

TABLE 9

Selection model for the decision to file a material contract on an 8-K or 10-Q/K

Panel A: Selection Model

	FORM8-K
DEBT_ISSUE	0.195*
	(1.691)
EQUITY_ISSUE	-0.214
	(-0.870)
MERGER	-0.023
	(-0.175)
LOG_FIRMS	0.014
	(0.292)
ROA	-0.186
	(-0.906)
LOSS	0.022
	(0.170)
LOG_ASSETS	-0.122***
	(-3.323)
#CONTRACTS	-0.097
	(-1.632)
Industry Dummies	Yes
Year/Quarter Dummies	Yes
Constant	-0.468
	(-0.971)
Observations	998
Pseudo-R-squared	0.089
ROC	0.712

***p<0.01, **p<0.05, *p<0.10 based on two tailed tests.
Standard errors are clustered by firm.
See Appendix C for variable definitions

(continued on next page)

TABLE 9 (continued)

Panel B: Models 1, 2, and 3 with controls for selection bias in the decision to file an 8-K and to request confidential treatment

	MONTHS TO APPROVAL	*PROTECTION PERIOD*	*SUCCESS*
Inverse Mills Ratios			
IMR – 8-K	0.062	-0.105	0.460
	(0.297)	(-0.957)	(0.800)
IMR – REDACT	0.149	-0.105	0.775
	(0.568)	(-0.817)	(0.930)
Section 408 Measures			
PE_RATIO	0.022**	0.001	-0.037
	(2.368)	(0.421)	(-1.015)
HIGH_MVE	-0.301*	0.251**	0.200
	(-1.861)	(2.391)	(0.239)
HIGH_VOLATILITY	-0.111	0.012	-0.651*
	(-1.017)	(0.248)	(-1.762)
Proprietary Costs			
RD	-0.009	-0.014	0.022
	(-0.409)	(-1.080)	(0.228)
LOG_FIRMS	0.041	-0.037*	-0.176
	(1.015)	(-1.860)	(-1.534)
SEGMENTS	-0.030	-0.097***	-0.173
	(-0.395)	(-2.583)	(-0.645)
IND_ROA	0.006	-0.002	0.045*
	(0.677)	(-0.400)	(1.655)
IND_RD	0.061	0.419***	0.731
	(0.225)	(2.799)	(0.659)
IND_CAPX	-2.145	2.873***	1.482
	(-1.216)	(3.287)	(0.230)
Red Flags			
RESTATEMENT	-0.101	-0.034	0.579
	(-0.747)	(-0.515)	(1.332)
ICMW	0.249*	0.012	1.402**
	(1.915)	(0.172)	(2.091)
SEC_INVESTIG	0.394**	0.043	-0.052
	(2.227)	(0.428)	(-0.064)
Firm and CTR Controls	Yes	Yes	Yes
Industry Indicators	Yes	Yes	No
Year and Quarter Indicators	Yes	Yes	Yes
LnAlpha	-0.654***	-1.910***	n/a
	(-4.328)	(-15.655)	
Observations	865	865	865

***p<0.01, **p<0.05, *p<0.10 based on two tailed tests unless indicated by sign prediction.
Standard errors are clustered by firm.
See Appendix C for variable definitions

To examine selection bias arising from the ability to file CTRs quickly, I follow E. Li (2010) in developing a first stage model to explain firms' decisions to file material contracts on an 8-K. The explanatory variables in this model include *DEBT_ISSUE*, *EQUITY_ISSUE*, *LOSS*, *LOG_FIRMS*, *ROA*, *#CONTRACTS*, and *LOG_ASSETS* as defined previously; an indicator variable equal to one if the firm entered into merger and acquisition activity during the year and equal to zero otherwise (*MERGER*); and indicator variables for industry membership. These results are reported in Table 9, Panel A. Table 9, Panel B presents coefficient estimates for Models 1-3 including Inverse Mills Ratios for firms' decisions to redact on an 8-K (*IMR-8K*) and firms' decisions to redact (*IMR-REDACT*). Neither Inverse Mills Ratio coefficient is statistically significant when included in the main analysis. These findings indicate that neither the decision to redact nor the time required to prepare a CTR are sources of selection bias in this analysis.

The Association between Financial Reporting Quality and Firms' Decisions to Request Confidential Treatment

Table 10 presents probit regressions of financial reporting quality and red flags on the probability of requesting a CTR. This analysis builds on the selection model presented in Table 8 and includes measures of financial reporting quality and red flags as defined previously. The coefficient estimates for reporting restatements (*RESTATEMENT*, $p<0.10$), internal control material weaknesses (*ICMW*, $p<0.01$), and firms disclosing receipt of a Wells Notice in 2008 (*WELLS*, $p<0.10$) are positive and significant, indicating that firms exhibiting red flags are significantly more likely to

TABLE 10

Financial reporting quality and firms' decisions to request confidential treatment

	REDACT	***REDACT***	***REDACT***	***REDACT***	***REDACT***
RESTATEMENT	0.165*				
	(1.895)				
ICMW		0.184***			
		(2.819)			
WELLS			0.411*		
			(1.682)		
DISC_ACCR				-0.023	
				(-1.355)	
UNEXPECTED_FEES					0.135***
					(3.248)
EQUITY_ISSUE	0.190*	0.183	0.195*	0.405***	0.203
	(1.660)	(1.602)	(1.710)	(3.143)	(1.565)
DEBT_ISSUE	-0.143***	-0.138***	-0.141***	-0.132**	-0.150***
	(-2.911)	(-2.809)	(-2.878)	(-2.486)	(-2.723)
ROA	0.099***	0.097***	0.099***	0.086***	0.111***
	(3.849)	(3.750)	(3.824)	(3.130)	(4.015)
LOSS	0.377***	0.364***	0.379***	0.349***	0.381***
	(6.926)	(6.653)	(6.971)	(5.949)	(6.353)
LOG_ASSETS	-0.038**	-0.041***	-0.039**	-0.026	-0.024
	(-2.450)	(-2.646)	(-2.485)	(-1.431)	(-1.279)
#CONTRACTS	0.007***	0.007***	0.006***	0.007***	0.010***
	(6.639)	(6.585)	(6.375)	(6.553)	(7.458)
LOG_FIRMS	-0.042***	-0.043***	-0.042***	-0.018	-0.018
	(-2.743)	(-2.858)	(-2.786)	(-1.105)	(-1.062)
SEGMENTS	0.007	0.001	0.007	-0.022	-0.069*
	(0.212)	(0.042)	(0.218)	(-0.595)	(-1.783)
FOREIGN_OP	0.024	0.012	0.025	0.025	-0.050
	(0.412)	(0.210)	(0.418)	(0.401)	(-0.766)
PENSION	0.086	0.076	0.086	0.044	0.084
	(1.595)	(1.406)	(1.604)	(0.761)	(1.448)
DIVIDENDS	0.042	0.059	0.052	-0.109	-0.016
	(0.289)	(0.408)	(0.360)	(-0.695)	(-0.101)
BIGN	0.233***	0.239***	0.232***	0.249***	0.220***
	(3.916)	(4.017)	(3.897)	(3.840)	(3.296)
%PUBLIC	2.012***	1.989***	2.000***	2.123***	2.214***
	(7.291)	(7.214)	(7.254)	(7.174)	(7.375)
IND_ROA	-0.026**	-0.026**	-0.027**	-0.009	-0.025**
	(-2.385)	(-2.384)	(-2.497)	(-0.695)	(-2.138)
IND_RD	0.096	0.098	0.094	0.088	0.033
	(1.502)	(1.532)	(1.472)	(1.312)	(0.482)
IND_CAPX	-1.439***	-1.459***	-1.387***	-1.774***	-1.772***
	(-2.861)	(-2.897)	(-2.760)	(-3.168)	(-3.115)
FOLLOWING	0.018***	0.019***	0.018***	0.015***	0.015***
	(3.855)	(3.946)	(3.735)	(2.885)	(2.812)
INTANGIBLES	0.080	0.091	0.091	-0.096	-0.036
	(0.612)	(0.693)	(0.692)	(-0.678)	(-0.253)
Constant	-1.404***	-1.367***	-1.385***	-1.486***	-1.492***
	(-8.381)	(-8.147)	(-8.270)	(-8.221)	(-8.159)
Observations	6014	6014	6014	4858	4544

***p<0.01, **p<0.05, *p<0.10 based on two tailed tests unless indicated by sign prediction.
See Appendix C for variable definitions

redact.[21] In addition, the coefficient for unexpected audit fees (*UNEXPECTED_FEES*, $p<0.01$) is positive and significant. Because CTRs are prepared by legal counsel rather than auditors, this finding is not due to the expense associated with preparing and defending requests for confidential treatment. Overall, this table suggests that firms with low financial reporting quality are more likely to request confidential treatment. When taken together with the results concerning CTR approval, firms with low financial reporting quality are more likely to request CTRs but these requests are also more likely to be successful, suggesting that the SEC applies greater scrutiny to these firms although these firms are less likely to redact ineligible information.

Supplemental Analysis

Disclosure Quality

Although disclosure quality may influence CTR approval decisions, I cannot test the role of disclosure quality on CTR approvals due to the lack of empirical measures of disclosure quality. Instead, I control for firms' voluntary disclosures outside of SEC filings. I use management earnings forecasts to proxy for firms' voluntary disclosures outside of financial reports. I create an indicator variable equal to one if the firm issued management guidance in 2007 per First Call and equal to zero otherwise (*CIG*). I measure company guidance in 2007 because firms' decisions to issue guidance during 2008 may not yet be observable at the time the firm requests a CTR.

Table 11, Panel A reports regression results for Models 1-3 including company-issued guidance. The coefficient estimates for company issued guidance (*CIG*) are not

[21] Wells Notices precede receipt of an AAER. Disclosure of a Wells Notice in 2008 indicates that the firm was currently under SEC investigation.

statistically significant and the inferences from coefficient estimates for SOX 408 criteria, proprietary costs, and red flags are consistent with those reported in Tables 3-5. I find no change in inferences concerning the SEC's decisions when including management earnings forecasts in the regression analysis nor is company issued guidance a significant determinant of the SEC's approval decisions.

I also examine the role of company issued guidance on firms' decision to request confidential treatment. I include the following variables constructed from First Call in the selection model presented in Table 8: *CIG*; An indicator variable equal to one if the firm issued guidance in 2008 and did not issue guidance in 2007 (*INITIATE_CIG*) and equal to zero otherwise; An indicator variable equal to one if the firm issued company guidance in 2007 and did not issue company guidance in 2008 (*DISCONTINUE_CIG*) and equal to zero otherwise; and the percentage of point forecasts out of total forecasts issued by management (*%POINT*). Table 11, Panel B presents the results of this analysis.

TABLE 11

Firm information environment and voluntary disclosure

Panel A: Company issued guidance and CTR approval decisions

	MONTHS TO APPROVAL	*PROTECTION PERIOD*	*SUCCESS*
CIG	0.106	-0.031	0.343
	(0.822)	(-0.519)	(0.824)
Section 408 Measures			
PE_RATIO	0.018**	-0.000	-0.058**
	(2.439)	(-0.005)	(-2.071)
HIGH_MVE	-0.278*	0.213**	0.530
	(-1.923)	(2.284)	(0.543)
Proprietary Costs			
RD	-0.006	-0.009	0.048
	(-0.315)	(-0.727)	(0.673)
LOG_FIRMS	0.044	-0.038**	-0.189*
	(1.189)	(-2.111)	(-1.652)
SEGMENTS	-0.057	-0.069*	-0.122
	(-0.836)	(-1.933)	(-0.521)
IND_ROA	0.008	-0.002	0.032
	(0.983)	(-0.425)	(1.091)
IND_RD	0.092	0.443***	0.863
	(0.409)	(3.404)	(0.824)
IND_CAPX	-0.647	2.760***	-1.023
	(-0.458)	(3.684)	(-0.197)
Red Flags			
RESTATEMENT	-0.077	-0.001	0.596*
	(-0.640)	(-0.023)	(1.704)
ICMW	0.212*	0.003	1.097**
	(1.731)	(0.047)	(2.015)
SEC_INVESTIG	0.361**	-0.023	-0.232
	(2.200)	(-0.227)	(-0.349)
Firm and CTR Controls	Yes	Yes	Yes
Industry Controls	Yes	No	No
Year and Quarter Indicators	Yes	Yes	Yes
lnAlpha	-0.669***	-1.835***	n/a
	(-4.633)	(-16.478)	
Observations	939	939	939

***p<0.01, **p<0.05, *p<0.10 based on two tailed tests unless indicated by sign prediction.
Standard errors are clustered by firm.
See Appendix C for variable definitions

(continued on next page)

TABLE 11 (continued)

Panel B: Association between company issued guidance and decision to request confidential treatment

	REDACT	***REDACT***	***REDACT***
INITIATE_CIG		-0.258*	
		(-1.682)	
DISCONTINUE_CIG		0.150	
		(1.416)	
%POINT			0.344**
			(2.055)
CIG	0.011	0.054	-0.032
	(0.195)	(0.875)	(-0.515)
Firm Controls	Yes	Yes	Yes
Firm-Level Industry	Yes	Yes	Yes
Industry Controls	No	No	No
Observations	6,280	6,280	6,280

***p<0.01, **p<0.05, *p<0.10 based on two tailed tests unless indicated by sign prediction.
See Appendix C for variable definitions.

The coefficient estimate for *CIG* is not statistically significant, indicating that issuing earnings guidance is not associated with firms' decisions to request confidential treatment. The coefficient estimate for *INITIATE_CIG* is negative and significant ($p<0.10$), suggesting that firms initiating guidance in 2008 are less likely to redact. In addition, the coefficient estimate for *%POINT* is positive and significant, suggesting that firms may balance withholding proprietary disclosures from investors with greater disclosure in other areas.

Measurement Window on Red Flags

To test the sensitivity of my results to time period over which I measure red flags, I vary the measurement window on restatements and internal control weaknesses. Table 12, Panel A presents the distribution of red flag events by year for firms in the full sample.[22] The number of Section 404 material weaknesses reported in each year from 2005-2008 is consistent across time with a minimum of 37 firms reporting Section 404 ICMWs in 2004 and a maximum of 48 firms reporting Section 404 ICMWs in 2005. The number of restatements per year is higher in 2005 and 2006, consistent with an increase in reported restatements during those two years among SEC registrants (Scholz 2008). The number of observations for firms reporting restatements that were investigated by the SEC is more variable from year to year, consistent with variation in the SEC's budget and enforcement priorities.

[22] Table 12, Panel A tabulates Red Flag events at the firm level rather than using CTRs as the unit of observation. Because some firms file multiple CTRs, these figures do not correspond directly to descriptive statistics in Tables 2 and 6.

TABLE 12

Varying the measurement window on red flags

Panel A: Number of sample firms disclosing red flag events in prior and subsequent years

	2004	2005	2006	2007	Pre 2008	Post 2008	2009
404 ICMW	37	48	38	45	0	45	27
302 ICMW	5	17	29	54	0	53	26
RESTATEMENT	41	70	75	52	27	9	33
FRAUD	2	0	0	0	0	0	0
SEC_INVESTIG	11	1	15	2	2	1	1

Note: Statistics are tabulated at the firm, rather than CTR, level.

Panel B: Varying the measurement window on restatements in negative binomial regression of duration to approval

	MONTHS TO APPROVAL	*MONTHS TO APPROVAL*	*MONTHS TO APPROVAL*	*MONTHS TO APPROVAL*	*MONTHS TO APPROVAL*
Restate 2006-2007	0.278**				
	(2.42)				
Restate 2008 Before		0.292		0.287	
		(1.526)		(1.498)	
Restate 2008 After			-0.554**	-0.542**	
			(-2.152)	(-2.103)	
Investigation 2008					0.444
					(1.170)
Proprietary Costs	Yes	Yes	Yes	Yes	Yes
Firm and CTR	Yes	Yes	Yes	Yes	Yes
Industry Indicators	Yes	Yes	Yes	Yes	Yes
Year and Qtr	Yes	Yes	Yes	Yes	Yes
Obs	998	998	998	998	998

***p<0.01, **p<0.05, *p<0.10 based on two tailed tests.
See Appendix C for variable definitions

(continued on next page)

TABLE 12 (continued)

Panel C: Varying the measurement window on restatements in a logistic regression of successful redaction

	SUCCESS	***SUCCESS***	***SUCCESS***	***SUCCESS***
Restate 2006-2007	0.843**			
	(2.09)			
Restate 2008 Before CTR		0.256		
		(0.24)		
Restate 2008 After CTR			A	
Investigation 2008				A
Proprietary Costs	Yes	Yes	Yes	Yes
Firm and CTR	Yes	Yes	Yes	Yes
Industry Indicators	Yes	Yes	Yes	Yes
Year and Qtr	Yes	Yes	Yes	Yes
Obs	998	998	998	998

A Variable is a perfect predictor of success
***p<0.01, **p<0.05, *p<0.10 based on two tailed tests.
See Appendix C for variable definitions

Panel D: Varying the measurement window on ICMWs in negative binomial regression of duration to approval and logistic regression on the probability of successful redaction

	MONTHS TO APPROVAL	***MONTHS TO APPROVAL***	***MONTHS TO APPROVAL***	***SUCCESS***	***SUCCESS***	***SUCCESS***
ICMW 06-07	0.343***			1.014*		
	(2.66)			(1.83)		
ICMW 2006		0.308*			1.017	
		(1.81)			(1.62)	
ICMW 2007			0.254			0.661
			(1.54)			(1.04)
Proprietary Costs	Yes	Yes	Yes	Yes	Yes	Yes
Firm and CTR	Yes	Yes	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	No	No	No
Year and Qtr	Yes	Yes	Yes	Yes	Yes	Yes
Obs	998	998	998	998	998	998

***p<0.01, **p<0.05, *p<0.10 based on two tailed tests.
See Appendix C for variable definitions

(continued on the next page)

TABLE 12 (continued)

Panel E: SOX Section 302 material weaknesses in the negative binomial regression of duration to approval and logistic regression on the probability of successful redaction

	MONTHS TO APPROVAL	***MONTHS TO APPROVAL***	***MONTHS TO APPROVAL***	***MONTHS TO APPROVAL***	***MONTHS TO APPROVAL***
302 ICMW 04-07	0.239				0.142
	(1.19)				(0.79)
302 ICMW 06-07		0.275			
		(1.39)			
302 ICMW 2006			0.555**		
			(2.02)		
302 ICMW 2007				0.276	
				(1.32)	
Red Flags	No	No	No	No	Yes
Proprietary Costs	Yes	Yes	Yes	Yes	Yes
Firm and CTR Controls	Yes	Yes	Yes	Yes	Yes
Industry Indicators	Yes	Yes	Yes	Yes	Yes
Year and Quarter Indicators	Yes	Yes	Yes	Yes	Yes
Obs	998	998	998	998	998

***p<0.01, **p<0.05, *p<0.10 based on two tailed tests.
See Appendix C for variable definitions

Table 12, Panel B reports regression results with variations in the measurement window for restatements and investigations. Firms reporting restatements in 2006 or 2007 have significantly longer duration to approval in the negative binomial regression ($p<0.05$). The coefficient for firms reporting restatements in 2008 prior to filing a CTR is not significant, and firms reporting restatements subsequent to requesting confidential treatment have significantly shorter duration to approval ($p<0.05$). Table 12, Panel C reports regression results for the probability of successful redaction. Firms reporting restatements in 2006 and 2007 have significantly higher odds of success, consistent with

the analysis in Table 5. Firms announcing restatements in 2008 prior to requesting confidential treatment have no difference in odds of success. All firms restating in 2008 after requesting confidential treatment were successful, therefore precluding estimating a regression coefficient. Table 11, Panel D reports regression coefficient estimates for Section 404 ICMWs. Firms reporting a Section 404 ICMW in 2006 or 2007 have significantly longer duration to approval ($p<0.01$), as do firms reporting Section 404 ICMWs in 2006 alone ($p<0.10$). The coefficient for reporting a Section 404 ICMW in 2007 is positive but not significant using two tailed tests.

Consistent with the analysis in Table 5, firms reporting Section 404 ICMWs in 2006 or 2007 have higher odds of success ($p<0.10$) but the estimates for reporting Section 404 ICMWs in either 2006 or 2007 are not significant at conventional levels. Overall, this analysis suggests that the conclusion that the SEC incorporates information on red flags into CTR decisions is not sensitive to the window over which red flags are measured.

Table 12, Panel E presents regression coefficient results for Section 302 ICMWs. Although reporting a Section 302 ICMW in 2006 is associated with longer duration to approval, other measurement windows on Section 302 ICMWs are not significant. These results suggest that Section 302 ICMWs are not associated with the SEC's decisions when reviewing CTRs. This finding is consistent with differences in the disclosure of material weaknesses under Section 302 and 404. Section 404 material weaknesses require an adverse audit opinion in addition to disclosure, whereas Section 302 material weaknesses require only disclosure. The association between material

weaknesses and CTR decisions is consistent with the difference in opinion modification, and therefore salience to investors, between the two types of material weaknesses.

Role of Agency and Staff Workload on CTR Decisions

The SEC's agency workload and budget appropriations may potentially influence CTR approval decisions. The main analysis controls for agency workload and budget by using year and quarter fixed effects. In supplemental analysis, I also control for the workload or judgment of the individuals approving CTRs within the Division of Corporate Finance. This analysis is included in Table 13. Including indicator variables for the 33 SEC staff members that signed CT Orders in 2008 and 2009 does not affect my inferences.

In addition, Congressional voting records or the preferences of legislators serving on agency oversight committees are commonly studied determinants of regulators' discretionary decisions (e.g. Wood and Waterman 1991; Correia 2009). I do not control for the political preferences of legislators or their voting records because my study takes place over a short period of time (2008-2009). However, I examine whether CTR approvals differ between 2008 and 2009 because of the change in SEC Chair in January 2009 and change in political party control of the Legislative and Executive branches following the 2008 election.

TABLE 13

CTR approval decisions controlling for SEC staff reviewers

	MONTHS TO APPROVAL	*PROTECTION PERIOD*	*SUCCESS*
Section 408 Measures			
PE_RATIO	0.016***	-0.001	-0.056**
	(3.076)	(-0.663)	(-2.040)
HIGH_MVE	-0.059	0.176**	0.742
	(-0.448)	(2.018)	(0.798)
Proprietary Costs			
RD	0.027	-0.007	-0.019
	(0.896)	(-0.357)	(-0.152)
LOG_FIRMS	-0.070	-0.035	0.064
	(-1.169)	(-1.039)	(0.246)
SEGMENTS	0.011	-0.001	0.009
	(1.407)	(-0.232)	(0.217)
IND_ROA	0.029	0.469***	0.808
	(0.128)	(3.885)	(0.753)
IND_RD	-0.416	1.758**	-7.786
	(-0.309)	(2.521)	(-1.252)
IND_CAPX	-0.012	-0.007	0.096
	(-0.877)	(-0.627)	(1.036)
Red Flags			
RESTATEMENT	-0.129	-0.022	0.599
	(-1.210)	(-0.398)	(1.440)
ICMW	0.183*	0.008	1.100*
	(1.849)	(0.126)	(1.783)
SEC_INVESTIG	0.239*	0.028	-0.022
	(1.801)	(0.302)	(-0.028)
SEC Staff Indicators	**Yes**	**Yes**	**Yes**
Firm and CTR Controls	Yes	Yes	Yes
Year and Quarter Indicators	Yes	Yes	Yes
Industry Indicators	Yes	No	No
lnAlpha	-1.504***	-2.082***	n/a
	(-5.497)	(-14.739)	
Observations	939	939	815[a]

[a] Loss of observations is due to some SEC staff members being a perfect predictor of success.
***p<0.01, **p<0.05, *p<0.10 based on two tailed tests.
Standard errors are clustered by firm
See Appendix C for variable definitions

TABLE 14

CTR approval decisions partitioned by year requested

	MONTHS TO APPROVAL		*PROTECTION PERIOD*		*SUCCESS*	
	2008	**2009**	**2008**	**2009**	**2008**	**2009**
Section 408 Measures						
PE_RATIO	0.037***	0.009	-0.001	0.001	-0.061	-0.076**
	(3.645)	(1.403)	(-0.397)	(0.356)	(-0.944)	(-2.408)
HIGH_MVE	-0.238	-0.212	0.235**	0.166	-0.083	0.897
	(-1.459)	(-1.004)	(2.214)	(1.258)	(-0.102)	(0.857)
Proprietary Costs						
RD	-0.047	0.035	-0.014	-0.008	0.130	0.063
	(-1.637)	(1.545)	(-0.847)	(-0.523)	(0.735)	(1.178)
LOG_FIRMS	0.018	0.094**	-0.042*	-0.038	-0.376*	-0.065
	(0.390)	(1.973)	(-1.948)	(-1.478)	(-1.844)	(-0.426)
SEGMENTS	-0.093	-0.019	-0.039	-0.107**	-0.071	-0.158
	(-0.979)	(-0.230)	(-0.831)	(-2.329)	(-0.163)	(-0.510)
IND_ROA	-0.001	0.019	-0.006	0.001	0.090***	-0.307
	(-0.104)	(1.389)	(-1.144)	(0.102)	(2.578)	(-0.811)
IND_RD	-0.456	0.648*	0.352**	0.536***	1.176	0.819
	(-1.559)	(1.884)	(2.245)	(3.070)	(0.666)	(0.448)
IND_CAPX	-1.056	-0.601	3.642***	2.311**	1.865	-3.012
	(-0.535)	(-0.316)	(3.559)	(2.417)	(0.181)	(-0.613)
Red Flags						
RESTATEMENT	-0.050	-0.094	-0.018	0.023	1.254*	0.821
	(-0.335)	(-0.601)	(-0.235)	(0.293)	(1.655)	(1.367)
ICMW	0.265*	0.132	0.021	-0.010	0.177	1.828**
	(1.679)	(0.861)	(0.252)	(-0.103)	(0.173)	(2.238)
SEC_INVESTIG	0.406**	0.311	0.009	-0.053	0.125	-0.612
	(2.020)	(1.630)	(0.080)	(0.410)	(0.077)	(-0.676)
Firm and CTR Controls	Yes	Yes	Yes	Yes	Yes	Yes
Calendar Quarter	Yes	Yes	Yes	Yes	Yes	Yes
Observations	478	461	478	461	478	461

***p<0.01, **p<0.05, *p<0.10 based on two tailed tests.
Standard errors are clustered by firm
See Appendix C for variable definitions

I examine the role of SOX 408 measures, proprietary costs, and red flags on *MONTHS_TO_APPROVAL*, *PROTECTION_PERIOD*, and *SUCCESS* separately for 2008 and 2009 by partitioning on the year in which the firm requested the CTR. I partition on the date requested rather than the date approved because the decision to apply scrutiny to a CTR takes place shortly following the request.

Table 14 reports the results partitioning Models 1-3 by year requested. I generally find consistent inferences in approval decisions across both periods, indicating that the change in SEC chair in January 2009 and change in political party control of Congress did not influence the SEC's approval decisions for CTRs.

Political Connections

Congressional Dominance Theory suggests that firms may influence regulatory outcomes through campaign contributions to members of Congress. Correia (2009) finds evidence suggesting that campaign contributions to members of Congress made by firms prior to engaging in fraudulent financial reporting may reduce the probability of receiving an AAER. To examine whether political contributions influence CTR decisions, I re-estimate Models 1-3 and include an indicator variable equal to one if the firm made campaign contributions during the 2006 election cycle through a political action committee as reported by the Federal Election Commission and equal to zero otherwise (*CONNECTED*). These findings are reported in Table 15. The coefficient on *CONNECTED* is not statistically significant in any of the three models. The inferences concerning the role of SOX 408 measures, proprietary costs, and red flags on CTR decisions remain consistent when controlling for political contributions. Overall, these

TABLE 15

Association between political connections and CTR approval decisions

	MONTHS TO APPROVAL	*PROTECTION PERIOD*	*SUCCESS*
CONNECTED	-0.128	0.096	0.289
	(-0.678)	(1.014)	(0.311)
Section 408 Measures			
PE_RATIO	0.018**	-0.000	-0.058**
	(2.445)	(-0.012)	(-2.254)
HIGH_MVE	-0.204	0.155	0.420
	(-1.238)	(1.425)	(0.354)
Proprietary Costs			
RD	-0.004	-0.011	0.058
	(-0.192)	(-0.805)	(0.826)
LOG_FIRMS	0.048	-0.040**	-0.179
	(1.301)	(-2.209)	(-1.601)
SEGMENTS	-0.053	-0.070**	-0.103
	(-0.778)	(-1.961)	(-0.444)
IND_ROA	0.009	-0.002	0.034
	(1.068)	(-0.497)	(1.138)
IND_RD	0.067	0.456***	0.849
	(0.298)	(3.555)	(0.816)
IND_CAPX	-0.954	2.830***	-1.996
	(-0.682)	(3.837)	(-0.395)
Red Flags			
RESTATEMENT	-0.079	-0.002	0.592*
	(-0.653)	(-0.038)	(1.675)
ICMW	0.223*	-0.001	1.131**
	(1.784)	(-0.013)	(2.043)
SEC_INVESTIG	0.361**	-0.022	-0.248
	(2.154)	(-0.219)	(-0.373)
Firm and CTR Controls	Yes	Yes	Yes
Industry Controls	Yes	No	No
Year and Quarter Controls	Yes	Yes	Yes
Observations	939	939	939

***p<0.01, **p<0.05, *p<0.10 based on two tailed tests.
Standard errors are clustered by firm
See Appendix C for variable definitions

findings suggest that political contributions do not influence the duration or outcome of CTR decisions.

Legal Expertise and CTR Approval

Legal expertise may significantly affect CTR quality and therefore the duration and outcome of the SEC's decisions. I consider the alternate explanation that firms with red flags exhibit significantly longer duration to approval because these firms retain lower quality legal counsel. Lower quality legal counsel would not explain why red flag firms have significantly higher odds of success than other firms. Although I cannot directly observe the identity of the firm's legal counsel that prepares CTRs, I expect firms' decisions to retain high quality external legal counsel mirror their decisions to retain high quality financial statement auditors. Accordingly, I expect that firms retaining Big N auditors retain high quality legal counsel.

I re-estimate Models 1 and 3 and add an interaction for red flags and Big N auditor. Table 16 presents coefficient estimates from the negative binomial regression using *MONTHS_TO_APPROVAL* as the dependent variable. I find several positive coefficients on interactions of red flags and Big N client, contrary to expectations. The coefficients on the interactions of Big N and restatement (*BIGN*RESTATEMENT*, $p<0.05$) and Big N and SEC investigation (*BIGN*SEC_INVESTIG*, $p<0.10$) are positive and significant. These findings suggest that if Big N clients retain high quality legal counsel, lower quality legal expertise does not explain why firms exhibiting red flags have significantly longer duration to approval.

TABLE 16

Interaction of Big N auditor and red flags

	MONTHS TO APPROVAL	***MONTHS TO APPROVAL***	***MONTHS TO APPROVAL***	***SUCCESS***	***SUCCESS***	***SUCCESS***
BIGN	0.028	0.132	0.106	0.310	0.375	0.194
	(0.254)	(1.161)	(1.014)	(0.816)	(0.959)	(0.534)
RESTATEMENT	-0.206			0.666		
	(-1.408)			(1.390)		
*BIGN*RESTATEMENT*	0.381**			0.512		
	(2.042)			(0.715)		
ICMW		0.106			0.813	
		(0.654)			(1.205)	
*BIGN*ICMW*		0.184			0.721	
		(0.888)			(0.771)	
SEC_INVESTIG			-0.018			-0.230
			(-0.095)			(-0.338)
*BIGN*SEC_INVESTIG*			0.474*			1.501
			(1.879)			(1.241)
Firm and CTR Controls	Yes	Yes	Yes	Yes	Yes	Yes
Industry Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year and Quarter Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	998	998	998	998	998	998

***p<0.01, **p<0.05, *p<0.10 based on two tailed tests.
Standard errors are clustered by firm.
See Appendix C for variable definitions.

Instead, these findings support the conclusion that firms exhibiting red flags receive greater scrutiny to avoid political costs because, among firms exhibiting red flags, larger firms that invest greater resources in external accounting services require longer duration to approval. I find no association between interactions of Big N auditor and red flags on the probability of success, suggesting that legal expertise has little effect on the outcome of the decision. This finding is consistent with the SEC basing CTR decisions on the merits of the case and with the SEC providing guidance and assistance to firms with lower quality legal counsel.

Media Attention

I examine the role of media attention on CTR approval decisions because firms with greater media coverage may be better known to the public and therefore may pose greater political costs to the SEC in the event of a firm failure. My proxy for media attention is membership on the Fortune World's Most Admired Companies list because widely admired firms maintain high prominence in the media. I re-estimate Models 1-3 including an indicator variable equal to one if the firm was listed on the Fortune World's Most Admired Company list in 2007 (*MOST_ADMIRED*). Table 17 presents the results of this analysis. The coefficient on *MOST_ADMIRED* is not statistically significant and the coefficient estimates for SOX 408 criteria, proprietary costs, and red flags yield inferences consistent with those reported in Tables 3-5. Overall, these findings suggest that media attention has little role in CTR approval decisions.

TABLE 17

The role of media attention on CTR approval decisions

	MONTHS TO APPROVAL	*PROTECTION PERIOD*	*SUCCESS*
MOST_ADMIRED	-0.030	0.024	-0.047
	(-1.046)	(1.358)	(-0.269)
Section 408 Measures			
PE_RATIO	0.018**	-0.000	-0.059**
	(2.444)	(-0.010)	(-2.196)
HIGH_MVE	-0.220	0.167*	0.646
	(-1.473)	(1.813)	(0.582)
Proprietary Costs			
RD	-0.004	-0.010	0.059
	(-0.199)	(-0.781)	(0.837)
LOG_FIRMS	0.048	-0.040**	-0.178
	(1.290)	(-2.209)	(-1.588)
SEGMENTS	-0.053	-0.070**	-0.112
	(-0.783)	(-1.963)	(-0.476)
IND_ROA	0.009	-0.003	0.034
	(1.082)	(-0.540)	(1.150)
IND_RD	0.071	0.455***	0.799
	(0.313)	(3.553)	(0.771)
IND_CAPX	-0.970	2.839***	-2.063
	(-0.689)	(3.882)	(-0.405)
Red Flags			
RESTATEMENT	-0.082	0.001	0.593*
	(-0.679)	(0.022)	(1.668)
ICMW	0.225*	-0.001	1.145**
	(1.797)	(-0.009)	(2.050)
SEC_INVESTIG	0.349**	-0.014	-0.249
	(2.080)	(-0.141)	(-0.368)
Firm and CTR Controls	Yes	Yes	Yes
Industry Controls	Yes	Yes	No
Year and Quarter Controls	Yes	Yes	Yes
Contract Controls	No	Yes	No
Observations	939	939	939

***p<0.01, **p<0.05, *p<0.10 based on two tailed tests.
Standard errors are clustered by firm.
See Appendix C for variable definitions.

Comment Letter and Duration to Comment Letter Approval

I examine the association between the SEC's decisions when corresponding with firms in the comment letter process and CTR approval decisions. In this analysis, the duration of time required to resolve a comment letter proxies for the SEC Staff's perceptions of the firm's financial reporting quality because prior research suggests that longer duration to approval for comment letters reflects comment letter severity (Chen and Johnston 2010; Ertimur and Nondorf 2006). I use the Audit Analytics comment letter module to identify correspondence conversations between registered firms and the SEC. Because the SEC does not post comment letter correspondence in EDGAR until the resolution of the comment letter, I expect that comment letters publicly released in EDGAR on the same day for a firm (dissemination_date per Audit Analytics) pertain to the same conversation. I identify the first and last letter in a comment letter conversation and calculate a firm specific average duration to approval for comment letters as the natural log of the mean number of days between the first and last comment letter in a conversation over the period 2006 to 2010 (*COMMENT_DURATION*).

Table 18, Panel A presents regression results controlling for comment letter duration. I also include *MERGER* in this test because merger and acquisition activity may increase the likelihood that the firm received a comment letter as well as the duration of time required to resolve the comment letter. The coefficient estimate for *COMMENT_DURATION* is not statistically significant, suggesting that comment letter duration to approval is not a significant determinant of CTR decisions. Further, the coefficient estimates for SOX 408 criteria, proprietary costs, and red flags yield consistent inferences as reported in Tables 3-5. Table 18, Panel B presents regression results for Models 1-3 including the natural log of the number of comment letters the firm received between 2006 and 2010 (*#COMMENT*). This measure reflects the extent to which the SEC initiates correspondence with the firm because higher numbers of comment letter initiations reflect more questions raised by SEC staff regarding the firm's financial reports to investors. The coefficient estimate for *#COMMENT* is not statistically significant in any of the three models and I find no change in the inferences from coefficient estimates for SOX 408 criteria, proprietary costs, and red flags when controlling for this dimension of the comment letter process.

TABLE 18

Association between comment letter decisions and CTR decisions

Panel A: Association between comment letter duration to approval and CTR approval decisions

	MONTHS TO APPROVAL	*PROTECTION PERIOD*	*SUCCESS*
COMMENT_DURATION	0.081	-0.025	-0.180
	(1.261)	(-0.751)	(-0.777)
Section 408 Measures			
PE_RATIO	0.018**	0.000	-0.060**
	(2.394)	(0.130)	(-2.197)
HIGH_MVE	-0.351**	0.237***	0.680
	(-2.439)	(2.602)	(0.741)
MERGER	0.238**	-0.097*	-0.162
	(2.149)	(-1.768)	(-0.457)
Proprietary Costs			
RD	-0.003	-0.012	0.053
	(-0.119)	(-0.863)	(0.747)
LOG_FIRMS	0.029	-0.032*	-0.128
	(0.854)	(-1.736)	(-1.129)
SEGMENTS	-0.059	-0.061	-0.088
	(-0.876)	(-1.608)	(-0.378)
IND_ROA	0.013*	-0.003	0.044**
	(1.890)	(-0.561)	(2.093)
IND_RD	0.099	0.429***	0.763
	(0.432)	(3.256)	(0.729)
IND_CAPX	-0.701	2.852***	-3.058
	(-0.501)	(3.840)	(-0.557)
Red Flags			
RESTATEMENT	-0.097	-0.006	0.603
	(-0.835)	(-0.098)	(1.600)
ICMW	0.242**	-0.008	1.454**
	(1.974)	(-0.116)	(2.407)
SEC_INVESTIG	0.343**	-0.012	-0.304
	(2.168)	(-0.125)	(-0.427)
Firm and CTR Controls	Yes	Yes	Yes
Industry Controls	Yes	No	No
Year and Quarter	Yes	Yes	Yes
Observations	915	915	915

***p<0.01, **p<0.05, *p<0.10 based on two tailed tests.
Standard errors are clustered by firm
See Appendix C for variable definitions

(continued on next page)

TABLE 18 (continued)

Panel B: Association between number of comment letters received and CTR approvals

	MONTHS TO APPROVAL	*PROTECTION PERIOD*	*SUCCESS*
#COMMENT	-0.007	-0.020	0.217
	(-0.089)	(-0.437)	(0.747)
Section 408 Measures			
PE_RATIO	0.018**	0.000	-0.064**
	(2.460)	(0.078)	(-2.368)
HIGH_MVE	-0.343**	0.241**	0.585
	(-2.319)	(2.560)	(0.626)
MERGER	0.242**	-0.098*	-0.174
	(2.171)	(-1.783)	(-0.493)
Proprietary Costs			
RD	-0.004	-0.011	0.051
	(-0.163)	(-0.814)	(0.720)
LOG_FIRMS	0.032	-0.034*	-0.132
	(0.928)	(-1.819)	(-1.204)
SEGMENTS	-0.056	-0.061	-0.108
	(-0.828)	(-1.632)	(-0.448)
IND_ROA	0.012*	-0.003	0.047**
	(1.715)	(-0.569)	(2.289)
IND_RD	0.110	0.428***	0.691
	(0.480)	(3.272)	(0.655)
IND_CAPX	-0.651	2.829***	-3.508
	(-0.470)	(3.797)	(-0.657)
Red Flags			
RESTATEMENT	-0.088	-0.004	0.537
	(-0.733)	(-0.067)	(1.420)
ICMW	0.235*	-0.005	1.423**
	(1.903)	(-0.067)	(2.439)
SEC_INVESTIG	0.351**	-0.015	-0.346
	(2.203)	(-0.146)	(-0.501)
Firm and CTR Controls	Yes	Yes	Yes
Industry Controls	Yes	No	No
Year and Quarter	Yes	Yes	Yes
Observations	915	915	915

***p<0.01, **p<0.05, *p<0.10 based on two tailed tests.
Standard errors are clustered by firm.
See Appendix C for variable definitions.

Pharmaceutical and Biotechnology Industry Analysis

I conduct a separate analysis of CTR approval decisions in pharmaceutical and biotechnology industry firms in order to examine the role of SOX 408 measures and red flags in an industry with high proprietary costs due to the important role of intellectual property in this industry. This analysis also addresses concerns that proprietary costs do not appear to influence CTR approval decisions because empirical measures of proprietary costs do not align well with firms' views of proprietary costs by examining a single industry commonly viewed as bearing high proprietary costs.

Table 19, Panel A presents univariate differences between redacting and non-redacting firms in pharmaceuticals. Pharmaceutical firms that redact have higher rates of issuing equity (*EQUITY_ISSUE*, $p<0.01$), are more likely to report a loss (*LOSS*, $p<0.01$), are larger measured using total assets (*LOG_ASSETS*, $p<0.01$), file more material contracts (*#CONTRACTS*, $p<0.01$), are more likely to report pension assets and liabilities (*PENSION*, $p<0.05$), are more likely to retain a Big N auditor (*BIGN*, $p<0.01$) and have higher analyst following (*#FOLLOWING*, $p<0.01$).

TABLE 19

Analysis of firms' redaction decisions and the SEC's approval decisions among pharmaceutical firms

Panel A: Univariate comparison of redacting and non-redacting firms in the pharmaceutical industry

	***REDACT*=1 n=185**	***REDACT*=0 n=327**	**T Stat**
EQUITY_ISSUE	0.10	0.02	**3.87**
DEBT_ISSUE	0.27	0.31	0.92
ROA	-0.62	-0.89	1.67
LOSS	0.85	0.74	**2.93**
LOG_ASSETS	4.56	3.89	**3.10**
# CONTRACTS	37.26	29.59	**5.54**
SEGMENTS	1.23	1.25	0.21
FOREIGN_OP	0.15	0.15	0.04
PENSION	0.62	0.52	**2.11**
BIGN	0.74	0.57	**4.03**
#FOLLOWING	5.28	2.70	**5.15**

See Appendix C for variable definitions.

(continued on the next page)

TABLE 19 (continued)

Panel B: CTR approval decisions among only firms in biotechnology and pharmaceuticals industries

	MONTHS TO APPROVAL	*PROTECTION PERIOD*	*SUCCESS*
Section 408 Measures			
PE_RATIO	-0.073	0.003	-0.036
	(-0.990)	(0.102)	(-0.093)
HIGH_MVE	-0.424	0.259	*a*
	(-1.581)	(1.556)	
Proprietary Costs			
SEGMENTS	-0.125	-0.100*	-0.368
	(-1.005)	(-1.687)	(-0.428)
Red Flags			
RESTATEMENT	-0.278	0.051	2.479*
	(-1.432)	(0.564)	(1.847)
ICMW	0.547**	0.122	-1.111
	(2.175)	(0.911)	(-0.665)
SEC_INVESTIG	0.289	-0.199	-0.139
	(0.947)	(-1.023)	(-0.066)
Firm and CTR Controls	Yes	Yes	Yes
Year and Quarter Controls	Yes	Yes	Yes
Observations	311	311	299

***p<0.01, **p<0.05, *p<0.10 based on two tailed tests.
a Variable dropped as a perfect predictor of success
Standard errors are clustered by firm
See Appendix C for variable definitions

Table 19, Panel B presents regression results for duration to approval and the outcome of CTR decisions for firms in the pharmaceutical industry. The sample size for this test is reduced to 311 observations. I estimate Models 1-3 without industry measures of proprietary costs (*IND_ROA*, *IND_RD*, *IND_CAPX*, *LOG_FIRMS*). The coefficient for material weaknesses is positive and significant (*ICMW*, $p<0.05$) in the negative binomial regression, indicating that pharmaceutical firms reporting material weaknesses incur longer duration to approval than pharmaceuticals firms that did not disclose a material weakness. In Model 2 examining the protection period, the coefficient for *SEGMENTS* remains negative and significant ($p<0.10$), suggesting that pharmaceutical firms reporting more operating segments may make weaker claims of proprietary costs. In the logistic regression examining the probability of successful redaction, the coefficient for restatements is positive and significant (*RESTATEMENT*, $p<0.10$), indicating that pharmaceuticals firms reporting a financial restatement have higher odds of success. These findings generally are consistent with the main analysis concluding that red flags influence the SEC's decisions to apply scrutiny to requests for disclosure exemptions.

Discretionary Accruals and Unexpected Audit Fees as Measures of the Public Interest in Promoting Disclosure

I examine whether discretionary accruals and unexpected audit fees, are associated with the SEC's CTR decisions. While I do not propose that the SEC implements these measures in the regulatory decision-making process, these measures may be correlated with other factors the SEC considers when reviewing CTRs. I calculate discretionary accruals (*DISC_ACCR*) as the residual from the Jones (1991) model as modified by Dechow et al. (1995). In addition, I include an indicator variable for negative cash flows from operations (Ball and Shivakumar 2006) and measure total accruals as the difference between earnings and cash flows. Next, I examine unexpected audit fees to capture the fee component that is not explained by firm fundamentals; i.e. the auditor's risk premium based on their private information of the client's underlying accounting quality. Hribar et al. (2009) argue that unexpected audit fees provide a measure of accounting quality that incorporates auditors' private information, that provides a broader measure of financial statement quality, and that is less confounded by firm fundamentals than other measures of earnings quality. I follow Hribar et al. (2009) in calculating unexpected audit fees (*UNEXPECTED_FEES*). Both discretionary accruals and unexpected audit fees are measured as of the annual report coinciding with the CTR or the annual report preceding the CTR for CTRs requested for quarterly or timely reports.

TABLE 20

Association between CTR decisions and discretionary accruals

Panel A: Descriptive statistics

	Obs	Mean	SD	5%	25%	50%	75%	95%
DISC_ACCR	900	-0.14	0.93	-1.25	-0.48	-0.15	0.07	0.82
ABS_DISC_ACCR	900	0.53	0.78	0.02	0.11	0.28	0.65	1.46
UNEXPECTED_FEES	865	0.06	0.54	-0.79	-0.30	0.03	0.39	1.03

Panel B: Discretionary accruals and unexpected audit fees in duration to approval

	MONTHS TO APPROVAL	***MONTHS TO APPROVAL***	***MONTHS TO APPROVAL***
DISC_ACCR	-0.105**		
	(-2.341)		
ABS_DISC_ACCR		-0.061	
		(-1.217)	
UNEXPECTED_FEES			0.119
			(1.341)
SOX 408 Measure			
PE_RATIO	0.020***	0.020***	0.019**
	(2.738)	(2.726)	(2.401)
HIGH_MVE	-0.245*	-0.241*	-0.267
	(-1.678)	(-1.645)	(-1.513)
Proprietary Costs			
RD	-0.007	-0.008	-0.001
	(-0.357)	(-0.377)	(-0.041)
LOG_FIRMS	0.061	0.051	0.031
	(1.544)	(1.313)	(0.733)
SEGMENTS	-0.053	-0.054	-0.022
	(-0.733)	(-0.745)	(-0.284)
IND_ROA	0.009	0.008	0.011
	(1.061)	(0.967)	(1.198)
IND_RD	-0.035	-0.066	0.077
	(-0.149)	(-0.280)	(0.315)
IND_CAPX	-1.551	-1.882	-1.003
	(-1.037)	(-1.249)	(-0.676)
Red Flags			
RESTATEMENT	-0.018	-0.017	-0.038
	(-0.154)	(-0.136)	(-0.291)
ICMW	0.275**	0.264**	0.091
	(2.230)	(2.115)	(0.679)
SEC_INVESTIG	0.275	0.276	0.233
	(1.608)	(1.614)	(1.486)
Firm and CTR Controls	Yes	Yes	Yes
Year and Quarter Indicators	Yes	Yes	Yes
Observations	863	863	816

***p<0.01, **p<0.05, *p<0.10 based on two tailed tests.
Standard errors are clustered by firm
See Appendix C for variable definitions

(continued on next page)

TABLE 20 (continued)

Panel C: Association between discretionary accruals and unexpected fees on the protection period

	PROTECTION PERIOD	***PROTECTION PERIOD***	***PROTECTION PERIOD***
DISC_ACCR	-0.024		
	(-0.920)		
ABS_DISC_ACCR		0.013	
		(0.455)	
UNEXPECTED_FEES			-0.040
			(-0.823)
SOX 408 Measures	Yes	Yes	Yes
Proprietary Costs	Yes	Yes	Yes
Red Flags	Yes	Yes	Yes
Firm and CTR Controls	Yes	Yes	Yes
Year and Quarter Indicators	Yes	Yes	Yes
Observations	863	863	816

***p<0.01, **p<0.05, *p<0.10 based on two tailed tests.
Standard errors are clustered by firm
See Appendix C for variable definitions

Panel D: Association between discretionary accruals and unexpected fees on probability of successful redaction

	SUCCESS	***SUCCESS***	***SUCCESS***
DISC_ACCR	0.327*		
	(1.796)		
ABS_DISC_ACCR		0.196	
		(1.014)	
UNEXPECTED_FEES			-0.323
			(-0.863)
SOX 408 Measures	Yes	Yes	Yes
Proprietary Costs	Yes	Yes	Yes
Red Flags	Yes	Yes	Yes
Firm and CTR Controls	Yes	Yes	Yes
Year and Quarter Indicators	Yes	Yes	Yes
Observations	863	863	816

***p<0.01, **p<0.05, *p<0.10 based on two tailed tests.
Standard errors are clustered by firm
See Appendix C for variable definitions

Table 20 reports the results of estimating Model 1 examining duration to approval including disrectionary accruals, the absolute value of discretionary accruals, and unexpected audit fees. The coefficient on *DISC_ACCR* is negative and significant ($p<0.05$), suggesting that firms with more positive discretionary accruals receive faster approval. *ABS_DISC_ACCR* and *UNEXPECTED_FEES* are not associated with duration to approval. In Table 20, Panel B, the coefficients for *DISC_ACCR* and *UNEXPECTED_FEES* are insignificant when regressed on protection period, consistent with the protection period reflecting primarily the competitive harm to proprietary disclosures. Table 20, Panel C presents coefficient estimates for *DISC_ACCR* and *UNEXPECTED_FEES* on the probability of successful redaction. The coefficient on *DISC_ACCR* is marginally positive and significant, suggesting that firms with more positive discretionary accruals have higher odds of success. The coefficients for *ABS_DISC_ACCR* and *UNEXPECTED_FEES* are not significant, suggesting no association with the odds of success.

Analysis of the Report Issued by the SEC's Office of the Inspector General

Following the January 2010 Congressional hearing on AIG's bailout, the SEC's Office of the Inspector General (OIG) initiated an audit of the processes and procedures for reviewing confidential treatment requests within the Division of Corporate Finance (SEC 2010). OIG's report, released on September 28, 2010, details the confidential treatment process during the 2008-2009 time periods. OIG reported four audit findings and documents policies and procedures that are consistent with, and strengthen the validity of, the empirical analysis in this paper. The following sections summarize the

findings and recommendations from the OIG report and analyze these findings within the context of the preceding empirical analysis.

Discussion of Finding 1 Pertaining to Policies for Reviewing CTRs

Finding 1 concludes that the Division of Corporate Finance's policies "do not provide for in-depth, substantive reviews of most confidential treatment requests" because a high percentage of CTRs are approved without seeking additional information from firms prior to approval. This outcome may increase the risk that the SEC will approve redaction of material information.

When the SEC receives CTRs, research specialists perform initial screenings based on company and application specific criteria, and make one of three recommendations to the Staff regarding CTR review: "No review," "Monitor," or "Full Review."[23] Then, the CTRs are assigned to Staff members who review the requests and make decisions to approve the CTRs or issue comments to the registrant. Staff members who approve CTRs generally follow the recommendations made by research specialists.[24] Classifying a CTR in the "No Review" category indicates that the CTR likely can be approved without requesting additional information or sending a comment letter to the registrant. This category comprises 68% of CTRs processed by the Division of Corporate Finance. When research specialists recommend "Monitor" status, the Staff generally issue comments to the firm on one or more aspects of the application but not

[23] The screening criteria are redacted from the OIG report as being proprietary to the SEC's regulatory process.

[24] OIG notes (page 11) "We found rare instances when the AD Office did not concur with ODS's recommendation of "No Review," or conducted any substantive evaluation of the application after such a recommendation was made."

on the entire application. This category comprises 23% of CTRs. The third category consists of CTRs selected for "Full Review" or comments on the entire application. This category comprises less than 10% of CTRs submitted to the Division of Corporate Finance. Overall, OIG concludes that the CTR process increases the risk that firms may withhold material information from investors using the confidential treatment process due to the high percentage of CTRs approved without correspondence.

The SEC's review categorization procedures strengthen the validity of my study. First, sorting CTRs into three review categories strengthens inferences from the duration analyses associating longer duration with added scrutiny. Although I cannot distinguish among the three groups, CTRs with long duration to approval most likely represent the CTRs selected for full review; therefore these CTRs are selected for, and receive, greater scrutiny than other CTRs. In addition, the finding that greater than two-thirds of CTRs are approved without comment provides an additional explanation for the findings that proprietary costs are not associated with duration to approval.

OIG Discussion of the Criteria Used to Screen CTRs into Review Categories

Next, Finding 1 contains a discussion of the criteria used by the SEC to screen CTRs. Although OIG redacted the SEC's firm and application specific screening criteria, my findings provide insight into several firm and application specific criteria used to screen CTRs. Red flag measures such as internal control material weaknesses and previous SEC investigations are significant predictors of long review periods, suggesting that these variables are predictors of "Monitor" or "Full Review" recommendations. In addition, several variables that predict lower odds of successful

redaction also provide insight into the firm and application specific criteria used to screen CTRs because applications selected for "No Review" are unlikely to result in un-redaction. Foreign filers have lower odds of success and the odds of success are decreasing as the number of exhibits redacted per application increases. In addition, firms in less concentrated industries have lower odds of success. These findings suggest that these variables are correlated with the SEC's proprietary screening criteria.

I also investigate other factors the SEC may consider in its proprietary screening criteria. First, CTRs are considered part of the financial statement review and comment letter process while a firm is under periodic review by the SEC in accordance with the Sarbanes-Oxley Act. For this reason, CTRs submitted by firms whose financial statements are under review may be assigned to the "Monitor" or "Full Review" category. I include an indicator variable equal to one if comment letter documents (documents labeled CORRESP or UPLOAD) are posted in EDGAR within three months prior to and months three subsequent to the CTR application (*COMMENT*).[25] I also control for mergers and acquisitions during the year the CTR is requested (*MERGER*) because these events are likely to trigger a review.

Finally, I control for other factors that the SEC may consider when screening and categorizing CTRs for review. I include an indicator variable equal to one if the firm received a going concern opinion in the most recent annual report (*GOING_CONCERN*) and equal to zero otherwise. Last, I include the natural logarithm of firm age (*FIRM_AGE*) measured as the number of years the firm is reported in CRSP to capture

[25] I require correspondence both before and after the CTR is submitted to ensure that the firm is under review at the time the CTR is submitted.

TABLE 21

Additional criteria correlated with CTR approval decisions

Panel A: Descriptive statistics

	Obs	Mean	SD	5%	25%	50%	75%	95%
COMMENT	998	0.360	0.480	0.000	0.000	0.000	1.00	1.00
MERGER	998	0.265	0.441	0.000	0.000	0.000	1.00	1.00
FIRM_AGE	998	2.389	0.682	1.386	1.792	2.398	2.89	3.555
GOING_CONCERN	998	0.062	0.242	0.000	0.000	0.000	0.00	1.00

Panel B: Multivariate analysis examining additional criteria associated with CTR approval decisions

	MONTHS TO APPROVAL	***MONTHS TO APPROVAL***	***MONTHS TO APPROVAL***
COMMENT	0.058		
	(0.615)		
GOING_CONCERN		-0.340**	-0.290*
		(-1.989)	(-1.736)
FIRM_AGE		0.158**	0.121
		(2.224)	(1.613)
MERGER		0.203*	0.207*
		(1.807)	(1.877)
SOX 408 Criteria			
PE_RATIO		0.018**	0.017**
		(2.193)	(2.289)
HIGH_MVE		-0.341*	-0.295*
		(-1.830)	(-1.735)
Red Flags			
RESTATEMENT			-0.099
			(-0.870)
ICMW			0.209*
			(1.722)
SEC_INVESTIG			0.336**
			(2.044)
Controls	Yes	Yes	Yes
Observations	998	940	940

***p<0.01, **p<0.05, *p<0.10 based on two tailed tests.
Standard errors are clustered by firm
See Appendix C for variable definitions

emerging companies. Table 21, Panel A presents descriptive statistics for these variables. The mean number of sample firms under comment letter review equals 0.36. This statistic is consistent with the Sarbanes-Oxley requirement for the SEC to review firms' financial statements at least once every three years. The mean number of merger or acquisition transaction in the sample equals 0.265. The mean and median firm age in the sample equals 11 years and six percent of firms received a going concern opinion in the most recent annual report.

Table 21, Panel B presents coefficient estimates for these additional criteria on *MONTHS_TO_APPROVAL*. I find that comment letter review is not associated with *MONTHS_TO_APPROVAL*. The coefficient for *MERGER* is positive and significant ($p<0.10$), suggesting that merger transactions are associated with marginally longer duration to approval. Likewise, the coefficient for *FIRM_AGE* is positive and significant ($p<0.10$) indicating longer duration to approval. The coefficient for *GOING_CONCERN* is negative and significant ($p<0.05$), indicating that distressed firms have significantly shorter duration to approval. Overall, these findings suggest additional insight into the criteria used by the SEC in sorting CTRs into review categories and are consistent with red flags triggering a more stringent level of review.

Discussion of Finding 2 Pertaining to the Language Used in Firms' CTR Requests

Finding 2 concerns the use by firms of "overly broad" language, boilerplate language, and "conclusory" [sic] statements in CTRs. OIG observed several approved CTRs that used overly broad language to support claims of competitive harm and noted boilerplate language across many applications. In addition, OIG concluded that the

screening process encouraged the use of boilerplate language and suggests that boilerplate language may increase the probability of receiving a "No Review" recommendation. The primary concern underlying this finding is that firms may improperly receive CTR approval without adequate justification for the merits of the application. This finding does not impact the preceding analysis because the language and text of CTRs is not publically observable. Further, overly broad and boilerplate language does not necessarily indicate redaction of material information: firms with strong merits may tailor their applications to facilitate approval.

Discussion of Finding 3 Pertaining to CTR Review Outside the Reviewer's Industry Expertise

Finding 3 concerns the assignment of CTRs to reviewers within the Disclosure Operations segment of the Division of Corporate Finance. Disclosure Operations is organized by industry group and the staff members within these groups are familiar with industry specific accounting and disclosure matters. OIG found that "a significant

number" of CTRs are assigned to Staff members with expertise outside the firm's industry, and that such assignments increase the risk of incorrectly granting confidential treatment. OIG notes that review by non-experts is more common among biotech and pharmaceuticals firms due to the high volume of requests from firms in these industries, and recommends that Staff in other industries be trained to review CTRs for biotech and pharmaceuticals firms.

This finding suggests that CTRs reviewed by Staff with expertise in other industries may be reviewed more quickly and may have higher probabilities of success because the reviewer lacks the expertise to evaluate firms' applications. Alternately, CTRs categorized into "Monitor" and "Full Review" categorizes may be more likely directed to industry experts and CTRs categorized as "No Review" may be directed to outside of the industry group, producing the same fact pattern. To evaluate the implications of Finding 3 on my analysis, I first identify Staff members who are likely to be industry experts and those who may possibly "rubber stamp" CTRs and perform two tests to examine the determinants of expert review and the effect of expert review and potentially "rubber stamp" review on CTR approval decisions.

TABLE 22

Industry distribution of CTR signers

Signer ID	SEC Industry Office											
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**Total Approved by Signer**
2					100 7.5							6
3			**100** 13.49									17
4	41.6 1.29	33.3 5.8	8.33 0.79		8.33 1.25					8.33 0.61		12
5	47.9 9		1.37 0.79		1.37 1.25	1.37 1.43	26.03 **86.36**		2.74 4.35	19.18 8.59		73
6	29.8 5.14	2.99 2.9		2.99 7.41		**58.21** **55.71**				5.97 2.45		67
7	**98.0** 13.1								1.92 2.17			52
8	4.76 0.26									**95.24** 12.27		21
9	3.23 0.51		**85.48** 42.06		3.23 2.5	1.61 1.43	1.61 4.55			3.23 1.23	1.61 0.95	62
10	16.8 3.86	57.3 **73.9**	11.24 7.94	2.25 7.41		4.49 5.71		1.12 5.56		5.62 3.07	1.12 0.95	89
11	5 0.26		5 0.79							**80** 9.82	10 1.9	20
12	**92.8** 3.34									7.14 0.61		14
14	50 1.29		10 0.79					20 11.11		20 1.23		10
15	10 2.57		4 3.17			1 1.43			2 4.35	3 1.84	**80** **76.19**	100
16	20.6 1.54	6.9 2.9	6.9 1.59		17.24 6.25	10.34 4.29			3.45 2.17	24.14 4.29	10.34 2.86	29
17	50 0.51					50 2.86						4
18	42.8 0.77	42.8 4.35								14.29 0.61		7
19			80 3.17							20 0.61		5
20	3.33 0.26		**86.67** 20.63							6.67 1.23	3.33 0.95	30
21	**100** 4.37											17
22								60 16.67		40 1.23		5
23			50 0.79		50 1.25							2
24	36.3 1.03					63.64 10						11
25	42.8 10.8	2.04 2.9			1.02 1.25	1.02 1.43			36.73 **78.26**	15.31 9.2	1.02 0.95	98
26	52.3 20.0	3.36 7.25	2.68 3.17	0.67 3.7	10.07 18.75	4.03 8.57			1.34 4.35	14.77 13.5	10.74 15.24	149

(continued on next page)

TABLE 22 (continued)

Signer ID	SEC Industry Office											
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**Total Approved by Signer**
27	26.67 1.03									**73.33** 6.75		15
28	11.11 0.26				11.11 1.25					77.78 4.29		9
29	4.17 0.51				**91.67** 55		4.17 9.09					48
30	20 0.51				10 1.25					70 4.29		10
31	49.06 6.68		1.89 0.79		3.77 2.5	1.89 1.43		20.75 **61.11**		22.64 7.36		53
32	90 2.31								10 2.17			10
33	48.57 8.74			31.43 **81.48**		5.71 5.71		1.43 5.56	1.43 2.17	11.43 4.91		70
Total CTRs Approved	389	69	126	27	80	70	22	18	46	163	105	1,115
Percentage of Total CTRs Approved	34.89	6.19	11.3	2.42	7.17	6.28	1.97	1.61	4.13	14.62	9.42	100

The first row for each signer consists of the percentage of CTRs signed by the Staff member per industry/office (row percentage). The second row for each signer consists of the percentage of CTRs in the industry office signed by that Staff member (column percentage). **Bold** indicates probable classification of the signer as an expert in the industry office based on row or column percentages.

Office industry affiliation:

1. Health Care and Insurance
2. Consumer Products
3. Computers and Online Services
4. Natural Resources and Food
5. Structured Finance
6. Manufacturing and Construction
7. Financial Services
8. Real Estate and Business Services
9. Beverages, Apparel, and Health Care Services
10. Electronics and Machinery
11. Telecommunications

To identify industry experts, I assign each firm to an industry office based on the SEC's list of industry offices by SIC code. I classify a Staff member as an industry expert if 70% or more of the CTRs approved by the Staff member belong to the same industry office. I also classify the Staff member as an expert if they individually signed greater than 50% of the CTRs in an industry office. I require the Staff member to have signed more than 10 CTRs during the 18 month period of my study to exclude individuals who do not regularly review CTRs. See Table 22 for a frequency table reporting the percentage of CTRs approved by individual for firms assigned to the 11 SEC industry offices.

I set an indicator variable equal to one if the CTR was approved by a Staff member designated as an industry expert following the procedure listed above (*EXPERT*) and equal to zero otherwise. I also partition Staff members as experts in SEC Offices 1 or 10 (Healthcare including pharmaceuticals and Electronics/Machinery respectively) versus experts in other industries because CTRs from firms in Offices 1 and 10 may be reviewed more commonly outside the industry office than CTRs from other firms. For this reason, my classification procedure may misclassify an individual as an expert in pharmaceuticals or manufacturing if they approve numerous CTRs outside their industry group. To address this concern, I create an indicator variable equal to one if the Staff member is an expert in Office 1 or 10, and equal to zero otherwise (*PHARM_EXPERT*). I also create an indicator variable equal to one for Staff members who are experts in industries 2-9 or industry 11 (*OTHER_EXPERT*).

TABLE 23

Logistic regression examining determinants of industry expert review

	EXPERT	*OTHER EXPERT*	*PHARM EXPERT*
Additional Criteria			
RESTATEMENT	0.392**	0.427	0.536*
	(2.066)	(1.488)	(1.868)
COMMENT_LETTER	0.527***	0.229	0.978***
	(2.950)	(0.835)	(3.510)
FIRM_AGE	-0.219	0.057	-0.589**
	(-1.464)	(0.281)	(-2.377)
GOING_CONCERN	0.326	0.253	0.212
	(0.728)	(0.291)	(0.386)
MERGER	-0.050	0.001	-0.119
	(-0.242)	(0.002)	(-0.317)
Section 408 Measures			
PE_RATIO	0.018*	0.037	-0.013
	(1.693)	(1.547)	(-0.945)
HIGH MVE	-0.983**	0.110	-1.818**
	(-2.276)	(0.176)	(-2.269)
Proprietary Costs			
LONG_PROTECTION_PERIOD	-0.276	-0.231	-0.144
	(-1.425)	(-0.816)	(-0.514)
RD	-0.026	0.064	-0.056
	(-0.733)	(0.570)	(-1.255)
LOG_FIRMS	0.154**	-0.003	0.056
	(2.282)	(-0.044)	(0.339)
SEGMENTS	0.158	-0.261	0.459**
	(1.135)	(-1.186)	(2.125)
IND_ROA	-0.023	-0.004	-0.262
	(-1.095)	(-0.202)	(-1.048)
IND_RD	-2.013***	1.315	-0.718
	(-3.728)	(0.940)	(-0.768)
IND_CAPX	4.498	3.366	-6.522
	(1.385)	(0.919)	(-0.591)
Firm and CTR Controls	Yes	Yes	Yes
Constant	-0.958	0.386	-0.627
	(-1.173)	(0.353)	(-0.377)
Observations	940	451	489
ROC	0.784	0.742	0.737

***p<0.01, **p<0.05, *p<0.10 based on two tailed tests.
Standard errors are clustered by firm
See Appendix C for variable definitions

To determine the potential affect of industry expert review on CTR decisions, I first examine whether firm and CTR characteristics explain whether CTRs are assigned to individuals within the firm's industry office or to staff members without industry expertise. Then, I examine whether approval by an industry expert affects CTR decisions. OIG's report suggests that Staff members outside the firm's industry expertise may be more likely to approve redaction of material information due to unfamiliarity with the industry. If the SEC assigns CTRs recommended for "Monitor" or "Full Review" to experts and CTRs recommended for "No Review" to available staff members, then I expect (a) the determinants of CTR review to predict approval by an industry expert and (b) that approval by an industry expert is associated with longer duration to approval and lower odds of success. Alternately, if CTR assignments are made based on individuals' work-load or on a haphazard basis, I expect (a) no association between firm and CTR characteristics and expert review and (b) expert review to be associated with longer-duration to approval and lower odds of success.

Table 23 reports coefficient estimates for three logistic regressions where the dependent variables equal *EXPERT*, *PHARM_EXPERT*, and *OTHER_EXPERT*. I include firm controls, proprietary costs, and the SOX Section 408 monitoring criteria in this regression. In column 1, I find positive and significant coefficients on *RESTATEMENT* ($p<0.05$), *COMMENT* ($p<0.01$), *PE_RATIO* ($p<0.10$), indicating that these variables are associated with higher odds of expert review. I find negative and significant coefficients on *FORM_8K, LOG_FIRMS, and IND_RD,* indicating that these variables are associated with lower odds of industry expert review. In columns 2 and 3,

I find that the SOX Section 408 criteria, proprietary costs, and other criteria predict industry expert review only in Office 1 and 10 and not in other industry offices. This finding provides additional evidence that these variables are used as screening criteria because the supply of expert reviewers in Offices 1 and 10 is limited due to the high volume of requests from firms in this industry, whereas the supply of reviewers in other industries is generally adequate to provide expert review to all CTRs.

Table 24 presents regression analysis examining CTR decisions with SEC reviewer expertise included as an independent variable. The coefficients for both *PHARM_EXPERT* ($p<0.01$) and *OTHER_EXPERT* ($p<0.01$) are positive and significant in the negative binomial regression on *MONTHS_TO_APPROVAL*, indicating that disclosure operations assigns CTRs to expert reviewers when greater scrutiny is required. The coefficient for *OTHER_EXPERT* is negative and significant ($p<0.01$) in Model 2 examining the protection period. This finding is consistent with industry experts applying greater scrutiny to claims of competitive harm. Finally, I find no association between expert review and the probability of success, indicating that industry experts are no more or less likely to reject applications. I find that the inferences for the SOX 408 measures, proprietary costs and red flags remain consistent when controlling for expert review.

TABLE 24

Effect of expert review on CTR decisions

	MONTHS TO APPROVAL	***PROTECTION PERIOD***	***SUCCESS***
PHARM_EXPERT	0.466***	-0.044	0.637
	(4.276)	(-0.654)	(1.074)
OTHER_EXPERT	0.362***	-0.175***	-0.416
	(3.231)	(-2.950)	(-1.106)
Section 408 Measures			
PE_RATIO	0.018**	0.001	-0.058**
	(2.410)	(0.219)	(-2.063)
HIGH_MVE	-0.243*	0.208**	0.627
	(-1.822)	(2.241)	(0.643)
Proprietary Costs			
RD	-0.002	-0.010	0.081
	(-0.084)	(-0.754)	(1.104)
LOG_FIRMS	0.040	-0.032*	-0.127
	(1.201)	(-1.783)	(-1.159)
SEGMENTS	-0.075	-0.065*	-0.105
	(-1.147)	(-1.792)	(-0.425)
IND_ROA	0.011	-0.003	0.033
	(1.375)	(-0.710)	(1.037)
IND_RD	0.250	0.342***	0.527
	(1.133)	(2.627)	(0.508)
IND_CAPX	-1.235	3.190***	-0.709
	(-0.878)	(4.210)	(-0.135)
Red Flags			
RESTATEMENT	-0.113	0.006	0.600*
	(-0.947)	(0.104)	(1.718)
ICMW	0.208*	0.005	1.117**
	(1.692)	(0.070)	(2.017)
SEC_INVESTIG	0.308*	-0.017	-0.259
	(1.939)	(-0.172)	(-0.399)
Firm and CTR Controls	Yes	Yes	Yes
Year and Quarter	Yes	Yes	Yes
Observations	939	939	939

***p<0.01, **p<0.05, *p<0.10 based on two tailed tests.
Standard errors are clustered by firm
See Appendix C for variable definitions

Finally, to identify the potential for "rubber stamping" as suggested in the OIG report, I examine the volume, industry distribution, and approval metrics for individual staff members in the Division of Corporate Finance. With 33 staff members reviewing approximately 1,000 CTRs in my sample, I expect that the average staff member signed approximately 35 CTRs. I consider any individual that signed 70 or more CTRs to have a high volume of approvals during the sample period. I identify 5 staff members that meet these criteria. Next, I examine the industry distribution of approved CTRs by individual and expect that individuals who receive CTRs to "rubber stamp" will approve CTRs in several industry offices. I identify five Staff members that meet both criteria. I examine the mean months-to-approval and % successful approvals for these five Staff members. I expect that if these reviewers "rubber stamp" CTRs, they approve CTRs more quickly and with higher rates of success for firms outside the Staff member's industry assignment.

I classify Staff members 10, 25, and 26 as potentially "rubber stamping" CTRs because they review CTRs more quickly for CTRs outside their industry expertise and because they approve CTRs with higher rates of successful redaction among firms outside their industry than within their industry. I create an indicator variable equal to one if the CTR was approved by one of these three individuals and if the firm was not assigned to the reviewer's industry office (*RUBBERSTAMP*). These metrics are presented in Table 25.

I examine the firm and industry characteristics of CTRs that may increase the odds of being "rubber stamped." I estimate a logistic regression with the dependent variable equal to one if the CTR is potentially "rubber stamped." I include red flags, SOX 408 monitoring criteria, *COMMENT*, proprietary costs, firm and CTR controls, and year and quarter fixed effects. Table 25, Panel B presents the results of this analysis. The coefficients for red flags are negative and significant (*RESTATEMENT*, $p<0.01$; *ICMW*, $p<0.10$; *SEC_INVESTIG*, $p<0.01$), consistent with the SEC assigning greater risk and therefore requiring greater scrutiny of these applications. In addition, the coefficient for firms in biotech and pharmaceuticals industries is positive and significant ($p<0.01$), indicating that CTRs are more likely to be potentially "rubber stamped" in this industry. Finally, Table 25, Panel C presents coefficient estimates for *RUBBERSTAMP* and red flags measures on duration to approval and the probability of successful redaction. The coefficient estimate for *RUBBERSTAMP* in the negative binomial regression on *MONTHS_TO_APPROVAL* is negative and significant ($p<0.01$) and is positive and significant in the logistic regression examining the odds of successful redaction ($p<0.01$), indicating that potentially "rubber stamped" CTRs are approved significantly faster ($p<0.01$) and have higher odds of success ($p<0.05$). The main inferences concerning red flags are consistent with controlling for potential "rubber stamping." These results provide additional support for the notion that the SEC screening process assigns more stringent review to red flag firms, including review assignment to industry experts.

TABLE 25

"Rubber Stamp" CTR approvals

Panel A: Identification of "rubber stamped" CTRs

		Approved within industry			Approved in other industries		
Signer	Total Approved	Obs	Months to Approval	% Successful	Obs	Months to Approval	% Successful
5	80	19	1	100%	61	1.36	93%
10	94	51	1.09	88%	43	0.67	97%
15	104	80	1.8	80%	24	0.708	83%
25	99	36	0.88	89%	63	0.507	98%
26[a]	149	78	0.794	97%	71	0.73	98%

[a] Signer 26 is not assigned an industry specialization in Panel A due to the broad range of offices over which this individual approves CTRs. For this table, I consider the industry expertise to be Office 1.

(continued on next page)

TABLE 25 (continued)

Panel B: Determinants of assignment to a rubber stamp approver

	RUBBERSTAMP	***RUBBERSTAMP***	***RUBBERSTAMP***	***RUBBERSTAMP***
RESTATEMENT	-0.705***			-0.499**
	(-3.393)			(-2.213)
ICMW		-0.446*		-0.076
		(-1.654)		(-0.257)
SEC_INVESTIG			-1.205***	-0.836*
			(-2.953)	(-1.913)
HIGH MVE	0.541	0.521	0.610	0.516
	(1.368)	(1.326)	(1.494)	(1.290)
PE_RATIO	-0.018**	-0.018**	-0.018**	-0.018**
	(-2.301)	(-2.199)	(-2.323)	(-2.315)
COMMENT	-0.008	-0.017	-0.028	-0.001
	(-0.043)	(-0.088)	(-0.146)	(-0.007)
PHARMA	1.093***	1.069***	1.104***	1.118***
	(4.749)	(4.667)	(4.658)	(4.749)
FIRM_AGE	0.054	0.048	0.086	0.097
	(0.335)	(0.301)	(0.530)	(0.598)
MERGER	0.254	0.215	0.230	0.251
	(1.055)	(0.905)	(0.954)	(1.036)
GOING_CONCERN	-0.727	-0.768	-0.856*	-0.812*
	(-1.470)	(-1.551)	(-1.726)	(-1.651)
Proprietary Costs	Yes	Yes	Yes	Yes
Firm and CTR	Yes	Yes	Yes	Yes
Industry Controls	Yes	Yes	Yes	Yes
Year and Quarter	Yes	Yes	Yes	Yes
Observations	949	949	949	949
ROC	0.769	0.762	0.767	0.771

***p<0.01, **p<0.05, *p<0.10 based on two tailed tests.
Standard errors are clustered by firm
See Appendix C for variable definitions

(continued on next page)

TABLE 25 (continued)

Panel C: Coefficient estimates for rubber stamped CTRs and red flags on duration to approval and the odds of successful redaction.

	MONTHS TO APPROVAL	***MONTHS TO APPROVAL***	***SUCCESS***	***SUCCESS***
RUBBERSTAMP	-0.951***	-0.935***	1.392**	1.540**
	(-8.831)	(-8.679)	(2.130)	(2.293)
RESTATEMENT		-0.155		0.840**
		(-1.386)		(2.373)
ICMW		0.228**		0.980*
		(1.996)		(1.892)
SEC_INVESTIG		0.323**		-0.221
		(2.072)		(-0.366)
Proprietary Costs	Yes	Yes	Yes	Yes
Firm and CTR Controls	Yes	Yes	Yes	Yes
Industry Controls	Yes	Yes	No	No
Year and Quarter Controls	Yes	Yes	Yes	Yes
Observations	998	998	998	998

***p<0.01, **p<0.05, *p<0.10 based on two tailed tests.
Standard errors are clustered by firm
See Appendix C for variable definitions

Discussion of Finding 4 Concerning Application Controls in the CTR Database

Finding 4 in the OIG report concerns application control weaknesses in the Microsoft Access database used by the Division of Corporate Finance to track CTRs. This finding does not affect the inferences of my study.

CHAPTER V

CONCLUSIONS

I examine the SEC's decisions to approve requests for confidential treatment of proprietary information in material contract filings. The confidential treatment process requires the SEC to balance the public interest in protecting proprietary information with the public interest in promoting disclosures to investors. I draw upon the economic and political science literatures on regulatory decision-making to test the strength of these interests on the duration and outcome of the SEC's decisions. I find that the public interests in promoting disclosure and protecting proprietary information influence different aspects of the SEC's decisions to grant regulatory exemptions. I also find that the SEC applies greater scrutiny to firms exhibiting red flag measures although these firms have higher odds of full approval. This pattern is consistent with the SEC reviewing CTRs to avoid legislative oversight and with firms applying for CTRs only when they meet the eligibility criteria.

This study makes several contributions to the literatures on disclosure choice and regulatory decisions. First, this study provides evidence on how securities regulators implement disclosure regulations by examining the SEC's weighting of competing public interests when evaluating requests for disclosure exemptions. These findings also contribute to the role of political influence on disclosure policy, as the SEC's exemption decisions are consistent with reducing the threat of legislative oversight because the SEC requires more documentation and applies greater scrutiny to applications from firms that pose higher political costs to the agency in the future.

Next, these findings are relevant to recent concerns that the SEC's process for reviewing other regulatory exemptions, such as No Action Letters and Exemptive Orders, is "increasingly difficult and unpredictable" and "a barrier to responsible market innovation," (Katz 2009). Also, the U.S. Senate directed the SEC in 2002 to institute "a consistent practice of prompt review" over exemption requests because regulatory delays can provide "significant, and potentially unwarranted, regulatory and economic benefits to companies" (U.S. Senate 2002). Although No Action Letters and Exemptive Orders differ from CTRs in many ways, my findings may be useful for understanding the SEC's decisions in other contexts and to firms seeking other types of regulatory exemptions.[26]

In addition, I contribute to the literature on redaction as a disclosure choice (Verrecchia and Weber 2006; Agarwal et al. 2009) by providing evidence on both the firm's decision to redact and the SEC's decision to approve the redaction. These findings also suggest that securing confidential treatment may be more costly for firms with low financial reporting quality in terms of managerial opportunity cost and legal fees due to the longer duration to approval.

Lastly, this study contributes to the literature on the SEC's resource allocations and decision-making. Recent studies examine the effectiveness of the SEC's comment letter process in improving financial reporting quality (Lei et al. 2010; Chen and

[26] CTRs differ from No Action Letters and Exemptive Orders in three important ways. First, No Action Letters and Exemptive Orders are requested less frequently than CTRs and are requested under several different statutes. The SEC issued 90 No Action Letters in 2009 under 17 different laws and regulations. In contrast, the SEC issued over 700 CTRs under the b(4) exemption to the FOIA. Second, some No Action Letters and Exemptive Orders set policy and establish legal precedent. In these cases, the risk of incorrect approval/rejection is significantly different than with CTRs. Third, No Action letters exempt firms from compliance with a law or regulation, whereas CTRs exempt firms from disclosure of specific information for a period of time.

Johnston 2010; Ertimur and Nondorf 2006) and determinants of the decision to issue an AAER (Files 2010; Correia 2009). CTR decisions provide an opportunity to study the SEC's resource allocations from a perspective other than comment letters or AAERs because registrants petition the staff for CTR approval. These findings indicate that, during a period of resource constraints, the SEC applied greater scrutiny to firms with low financial reporting quality when evaluating requests for regulatory exemptions.

This study is subject to two main limitations. First, data availability limits this study to a period of less than two years because CTR approvals were not observable prior to May 2008. This horizon precludes studying longer term trends in resource allocation, political influence on CTR approval decisions, or variation in CTR requests and approvals with the business cycle. Second, the study takes place during a period of heightened political costs due to macro-economic conditions, therefore red flags may figure more prominently in the SEC's decisions during this time period than during periods of greater market stability. Both limitations provide opportunities for future study.

REFERENCES

Agarwal, V., W. Jiang, Y. Tang, and B. Yang, 2009. Do institutional investors have an ace up their sleeves? Evidence from confidential filings of portfolio holdings. Working paper, Georgia State University College of Business, Atlanta, GA.

Ali. A, S. Klasa, and E. Yeung. 2009. The limitations of industry concentration measures constructed with Compustat data: Implications for finance research. *Review of Financial Studies* 22 (10): 3839-3871.

Alison, P. 1984. *Event History Analysis Regression for Longitudinal Event Data.* Sage University Paper Series: Quantitative Applications in the Social Sciences, Newbury Park.

Ando, A. 1999. Waiting to be protected under the Endangered Species Act: The political economy of regulatory delay. *Journal of Law and Economics* 42: 29-60.

Armstrong, J. 1959. Congress and the Securities and Exchange Commission. *Virginia Law Review* 45 (6): 795-816.

Ball, R. and L. Shivakumar. 2006. The role of accruals in asymmetrically timely gain and loss recognition. *Journal of Accounting Research* 44 (2): 207-242.

Carpenter, D. 2002. Groups, the media, agency waiting costs, and FDA drug approval. *American Journal of Political Science* 46 (3): 490-505.

Chen, R. and R. Johnston. 2010. Securities and Exchange Commission comment letters: Enforcing accounting quality and disclosure. Working paper, Sloan School of Management, Massachusetts Institute of Technology, Cambridge, MA.

Comizio, V. 1983. Keeping corporate information secret: Confidential treatment under the Securities Act of 1933 and the Securities Exchange Act of 1934. *New England Law Review* 18 (4): 787-806.

Correia, M. 2009. Political connections, SEC enforcement, and accounting quality. Working paper, Rock Center for Corporate Governance, Stanford University, Palo Alto, CA.

Dechow, P., R. Sloan, and J. Sweeney. 1995. Detecting earnings management. *The Accounting Review* 70 (2): 193-225.

Department of Justice (DOJ). 2004. Department of Justice Guide to the Freedom of Information Act. Washington, D.C. (Access date: September 2010).

Doyle, J., W. Ge, and S. McVay. 2007. Determinants of weaknesses in internal control over financial reporting. *Journal of Accounting and Economics* 44 (1-2): 193-223.

Dranove, D., and D. Meltzer. 1994. Do important drugs reach the market sooner? *The RAND Journal of Economics* 25 (3): 402-423.

Ertimur, Y. and M. Nondorf. 2006. IPO firms and the SEC comment letter process. Working Paper, University of California at Berkeley Hass School of Business, Berkeley, CA.

Files, R. 2010. SEC Enforcement: Does forthright disclosure and cooperation really matter? Working paper, The University of Texas at Dallas College of Business, Richardson, TX.

Fiorina, M. 1982. Legislative choice of regulatory forms: Legal process or administrative process? *Public Choice* 39: 33-66.

Harris, M. 1998. The association between competition and managers' business segment reporting decisions. *Journal of Accounting Research* 36 (1): 110-128.

Hosmer, D. and S. Lemeshow. 1980. A goodness-of-fit test for the multiple logistic regression model. *Communication Statistics* 9: 1043-1069.

Hribar, P., T. Kravet, and R. Wilson. 2009. A new measure of accounting quality. Working paper, University of Iowa Tippie College of Business, Iowa City, IA.

Jones, J. 1991. Earnings management during import relief investigations. *Journal of Accounting Research* 29: 193–228.

Joskow, P. 1974. Inflation and environmental concern: Structural change in the process of public utility price regulation. *Journal of Law and Economics* 17 (2): 291-327.

Katz, J. 2009. Examining the efficiency and effectiveness of the Securities and Exchange Commission. U.S. Chamber of Commerce Center for Capital Markets Competitiveness. (Access Date: September, 2010) Available at: http://www.centerforcapitalmarkets.com/wp-content/uploads/2010/04/ExaminingtheSECrdcfinal.pdf

Kinney, W. 2005. Twenty-five years of audit de-regulation and re-regulation: What does it mean for 2005 and beyond? *Auditing: A Journal of Practice and Theory* 24 (Supplement): 89-109.

Kosnick, L. 2005. Sources of bureaucratic delay: A case study of FERC dam relicensing. *Journal of Law, Economics, and Organizations* 22 (1): 258-288.

Lei, G., J. Lawrence, and D. Smith. 2010. SEC comment letters and financial restatements. Working paper, University of Nebraska College of Business, Lincoln, NE.

Leuz, C. 2004. Proprietary versus non-proprietary disclosures: Evidence from Germany. *The Economics and Politics of Accounting: International Perspectives on Research Trends, Policy, and Practice* Oxford University Press. 164-197. New York.

_____, and P. Wysocki. 2009. Economic consequences of financial reporting and disclosure regulation: A review and suggestions for future research. Working paper, The University of Chicago Booth School of Business, Chicago, IL.

Lev, B. 1988. Toward a theory of equitable and efficient accounting policy. *The Accounting Review* 63 (1): 1-22.

Li, E. 2010. Revealing future prospects without forecasts: the case of accelerating material contracts disclosure. Working paper, University of Rochester College of Business, Rochester NY.

Li, X. 2010. The impact of product market competition on the quantity and quality of voluntary disclosures. *Review of Accounting Studies* 15: 663-711.

Long, J. S., and J. Freese. 2006. *Regression Models for Categorical Dependent Variables Using STATA*. 2nd ed. Stata Press, College Station, TX.

Lupia, A. and M. McCubbins.1994. Learning from oversight: Fire alarms and police patrols reconstructed. *Journal of Law Economics, and Organization* 10 (1): 96-125.

McCubbins, M. 1985. The legislative design of regulatory procedure. *American Journal of Political Science* 29: 721-748.

_____, and T. Schwartz. 1985. Congressional oversight overlooked: Police patrols versus fire alarms. *American Journal of Political Science* 28: 165-179.

New York Times (NYT). 1985. Criticism of S.E.C. May 16, 1985, Section D, Page 9.

Newman, P. 1996. Requests for confidential treatment and "silent filings." *S&P's Review of Securities and Commodities Regulation.* May 8, 1996.

Noll, R. 1985. Government regulatory behavior: A multidisciplinary survey and synthesis. *Regulatory Policy and the Social Sciences*. University of California Press, Berkeley, CA.

Olson, M. 1995. Regulatory agency discretion among competing industries: Inside the FDA. *Journal of Law, Economics, and Organization* 11 (2): 379-405.

_____. 1997. Firm characteristics and the speed of FDA approval. *Journal of Economics and Management Strategy* 6 (2): 377-401.

Peltzman, S. 1973. An evaluation of consumer protection legislation: The 1962 Drug Amendments. *The Journal of Political Economy* 81(5): 1049-1091.

_____. 1976. Toward a more general theory of regulation. *Journal of Law and Economics* (19) 2: 211-240.

Phillips, S. and J. Zechner. 1982. *The SEC and the Public Interest*. MIT Press, Cambridge, MA.

Posner, R.A. 1974. Theories of economic regulation. *The Bell Journal of Economics and Management Science* 5 (2): 335-358.

Public Company Accounting Oversight Board (PCAOB). 2004. Auditing Standard 2: An Audit of Internal Control Over Financial Reporting Performed in Conjunction with an Audit of Financial Statements. Washington, D.C.

Scholz, S., 2008. The changing nature and consequences of public company financial restatements. *The U. S. Department of the Treasury* Available at: http://www.ustreas.gov/press/releases/hp914.htm (Access date: September 2010)

Securities and Exchange Commission (SEC).1956. 22nd Annual report of the Securities and Exchange Commission. Washington, D.C.

_____. 1997. Staff Legal Bulletin 1 "Confidential treatment requests." Washington D.C. (Access Date: September 2009)
Available at: http://www.sec.gov/interps/legal/slbcf1r.htm

_____. 2001. Staff Legal Bulletin 1 "Confidential treatment requests (with Addendum)." Washington D.C. (Access Date: September 2009)
Available at: http://www.sec.gov/interps/legal/slbcf1r.htm

_____. 2004. Final rule release 33-8400, 34-49424. (Access date: September 2010) Available at: http://www.sec.gov/rules/final/33-8400.htm

_____. 2008. SEC's oversight of Bear Stearns and related entities: Broker dealer risk assessment program. (Access date: September 2010) Available at: http://www.sec-oig.gov/Reports/AuditsInspections/2008/446-b.pdf

_____. 2009. Investigation of failure of the SEC to uncover Bernard Madoff's Ponzi scheme – public version. (Access date: September 2010) Available at: http://www.sec.gov/news/studies/2009/oig-509.pdf

_____. 2010. Assessment of corporation finance's confidential treatment processes and procedures – public version. (Access date: November 2010) Available at: http://www.sec-oig.gov/Reports/AuditsInspections/2010/479.pdf

Sigman, H. 2001. The pace of progress at Superfund sites: Policy goals and interest group influence. *Journal of Law and Economics* 44 (1): 315-344.

Stigler, G. 1971. The theory of economic regulation. *The Bell Journal of Economics and Management Science* 2 (1): 3-21.

Towns, E. 2010. Testimony before the Committee on Financial Services. U.S. House of Representatives, September 16, 2010. (Access date: November 2010). http://financialservices.house.gov/Media/file/hearings/111/Towns091610.pdf

United States House of Representatives, 2010. 111th Congress 2nd Session, S.3717.

United States Senate (U.S. Senate). 2002. Financial oversight of Enron: the SEC and private-sector watchdogs. Report to the staff of the Senate Committee on Government Affairs. (Access date: September 2010) Available at: http://hsgac.senate.gov/100702watchdogsreport.pdf

Verrecchia, R. 1983. Discretionary disclosure. *Journal of Accounting and Economics* 5: 365-380.

_____, 2001. Essays on disclosure. *Journal of Accounting and Economics* 32: 97-180.

_____, and J. Weber. 2006. Redacted disclosure. *Journal of Accounting Research* 44 (4): 791-814.

Watts, R., and J. Zimmerman.1986. *Positive Accounting Theory* Prentice Hall, London.

Weingast, B. and M. Moran. 1983. Bureaucratic discretion or congressional control? Regulatory policymaking by the Federal Trade Commission. *The Journal of Political Economy* 91 (5): 765-800.

Wood, B. and R. Waterman. 1991. The dynamics of political control of the bureaucracy. *The American Political Science Review* 85 (3): 801-828.

APPENDIX A

INDUSTRY CONCENTRATION AS A DETERMINANT OF FIRMS' REDACTION DECISIONS

This analysis provides construct validity for use of the industry concentration measures in the multivariate analysis. Ali et al. (2009) document that using a Hirfindahl Index of industry concentration constructed from Compustat data may lead to incorrect inferences. Instead, they recommend using industry concentration data published by the U.S. Census Department. The Census Department includes private firms in the calculation of industry concentration. I do not use Census Department Hirfindahl Index data because Census releases Hirfindahl Indices only for manufacturing firms and my sample includes a large number of non-manufacturing firms. Instead, I construct alternate measures of industry concentration using the total firms reported per NAICS from the 2007 Economic Census in lieu of a Census H-Index. Specifically, I construct the log number of firms per NAICS per Census and the percentage of firms in an industry (per Census) covered in Compustat.

Panel A: Descriptive Statistics on measures of industry concentration in 2007.

	Obs	Mean	SD	Min	25%	50%	75%	Max
H_INDEX NAICS	7,470	2,715	2,634	170	684	1,913	3,717	10,000
H_INDEX SIC4	10,269	1,580	1,892	100	146	912	2,317	10,000
LOG_FIRMS	6,558	7.998	2.010	2.079	6.492	7.805	9.390	10.100
%FIRMS	6,557	5.24%	8.80%	0.00%	0.34%	1.49%	3.84%	36.63%

NAICS 300000 Manufacturing

	Obs	Mean	SD	Min	25%	50%	75%	Max
H_INDEX NAICS	2,685	3,247	2,707	532	1,594	2,049	4,196	10,000
H_INDEX SIC4	2,689	2,583	2,111	146	1,028	1,958	3,466	10,000
LOG_FIRMS	2,613	6.374	0.970	2.996	5.826	6.495	6.870	10.101
%FIRMS	2,613	10%	10%	0%	1%	5%	16%	37%
H_INDEX per 2002	2,689	723	537	4	350	584	918	2816

Panel B: Principle Component Analysis of measures of industry concentration.

	Firms with all available data (n=6,550)		Manufacturing Firms Only (n=2,610)	
	Comp 1	Comp 2	Comp 1	Comp 2
Eigenvalue	1.867	1.458	2.28	1.425
Proportion Variation	0.466	0.364	0.456	0.285
Component Loadings	**Comp 1**	**Comp 2**	**Comp 1**	**Comp 2**
H_INDEX NAICS	**0.6455**	0.1941	**0.5795**	0.1430
H_INDEX SIC4	**0.6335**	0.1710	**0.5324**	0.2139
LOG_FIRMS	-0.4260	**0.5851**	-0.3220	**0.6084**
%FIRMS	-0.0200	**-0.7686**	**-0.5089**	-0.1904
H_INDEX per 2002	N/A	N/A	0.1346	**-0.7262**

Bold indicates loading greater than 0.40.

(continued on next page)

Panel C: Replication of Verrecchia and Weber (2006) varying measures of industry concentration

	Sign	***REDACT***	***REDACT***	***REDACT***	***REDACT***	***REDACT***
H_INDEX SIC2	-	-0.228**				
		(-2.049)				
H_INDEX NAICS	-		-0.226***			
			(-2.685)			
LOG_FIRMS	-			-0.102***		
				(-8.689)		
%FIRMS	+				2.716***	
					(12.365)	
H_INDEX 2002 Census						-0.000
						(-0.033)
EQUITY_ISSUE		0.180*	0.163*	0.214**	0.127	0.436***
		(1.890)	(1.672)	(2.063)	(1.208)	(3.010)
DEBT_ISSUE		-0.194***	-0.194***	-0.234***	-0.183***	-0.332***
		(-4.487)	(-4.424)	(-5.029)	(-3.890)	(-4.901)
ROA		0.058***	0.070***	0.063***	0.085***	0.046
		(2.711)	(3.085)	(2.679)	(3.304)	(1.581)
LOSS		0.476***	0.478***	0.455***	0.368***	0.623***
		(10.088)	(9.990)	(8.931)	(7.012)	(8.550)
LOG_ASSETS		0.012	0.009	0.022*	0.019	0.032*
		(1.166)	(0.809)	(1.924)	(1.630)	(1.830)
#CONTRACTS		0.007***	0.007***	0.007***	0.007***	0.015***
		(7.881)	(8.026)	(7.156)	(7.135)	(6.907)
Constant		-1.612***	-1.577***	-0.857***	-1.782***	-1.823***
		(-20.935)	(-20.423)	(-7.461)	(-22.625)	(-15.211)
Observations		7,047	6,854	6,057	6,057	2,518
ROC		0.663	0.660	0.691	0.705	0.705

***p<0.01, **p<0.05, *p<0.10 based on two tailed tests.
T statistics are presented in parentheses.
All variables are measured as of the end of 2007 except the 2002 Census H-Index.
Variable definitions are reported in Appendix C.

APPENDIX B

EXAMPLE OF CONFIDENTIAL TREATMENT REQUEST WITH PARTIAL UN-REDACTION

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
August 27, 2009
ORDER GRANTING CONFIDENTIAL TREATMENT
UNDER THE SECURITIES EXCHANGE ACT OF 1934

Dyax Corp.

File No. 0-24537 - CF#23538

Dyax Corp. submitted an application under Rule 24b-2 requesting confidential treatment for information it excluded from Exhibit 10.1 to Form 10-Q filed on May 7, 2009, as amended by reduced redactions from the same contract filed as Exhibit 10.1 to Form 10-Q/A filed on August 18, 2009.

Based on representations by Dyax Corp. that this information qualifies as confidential commercial or financial information under the Freedom of Information Act, 5 U.S.C. 552(b)(4), the Division of Corporation Finance has determined not to publicly disclose it. Accordingly, excluded information from the following exhibit(s) will not be released to the public for the time period(s) specified:

Exhibit 10.1 through August 21, 2017

For the Commission, by the Division of Corporation Finance, pursuant to delegated authority:

Christian Windsor
Special Counsel

Excerpted Portion of Exhibit 10.1 as originally filed on May 7, 2009

Schedule 8.01(s)(i)

[*****]

Confidential materials omitted and filed separately with the Securities and Exchange Commission. Asterisks denote such omission.

Excerpted Portion of Exhibit 10.1 as amended and filed with fewer redactions on August 18, 2009

Schedule 8.01(s)(i)
LFRP Joint Patents owned by Borrower

AZ APPLICATIONS (ANTIBODIES) PROSECUTED BY AZ

MATTER		SERIAL	PATENT	PUBL	TITLE	STATUS	ISSUE	EXPIRATION
AZ-03-01-CIP-PCT-AR	AR	04 01 04408		1890266A	Antibodies	ABANDONED		9 /13/2008
AZ-03-01-CIP-PCT-AU	AU	2004293180			Antibodies	PENDING		11/26/2024
AZ-03-01-CIP-PCT-BD	BD	277/2004	1004419		Antibodies	ABANDONED	8 /13/2006	9 /13/2008
AZ-03-01-CIP-PCT-BR	BR	PI0417023-7			Antibodies	PENDING		11/26/2024
AZ-03-01-CIP-PCT-CA	CA	PCT/EP04/013426			Antibodies	PENDING		11/26/2024
AZ-03-01-CIP-PCT-CL	CL	2004-3047			Antibodies	ABANDONED		9 /13/2008
AZ-03-01-CIP-PCT-CN	CN	200480035257.5			Antibodies	PENDING		11/26/2024
AZ-03-01-CIP-PCT-CO	CO	06062058			Antibodies	ABANDONED		9 /13/2008
AZ-03-01-CIP-PCT-EG	EG	493/200600			Antibodies	ABANDONED		9 /13/2008
AZ-03-01-CIP-EP	EP	04819225.6		EP1687336	Antibodies	PUBLISHED		11/26/2024
AZ-03-01-CIP-PCT-GB	GB	0426043.6			Antibodies	PENDING		11/26/2024
AZ-03-01-CIP-PCT-GC	GC	GCC/P/2004/4030			Antibodies	PENDING		11/26/2020
AZ-03-01-CIP-PCT-ID	ID	W-00 2006 01433			Antibodies	ABANDONED		9 /13/2008
AZ-03-01-CIP-PCT-IL	IL	175608			Antibodies	PENDING		11/26/2024
AZ-03-01-CIP-PCT-IN	IN	3699			Antibodies	PENDING		11/26/2024
AZ-03-01-CIP-PCT-JP	JP	2006-540392		2008-502311	Antibodies	PUBLISHED		11/26/2024
AZ-03-01-CIP-PCT-KR	KR	10-2006-7010370			Antibodies	PENDING		11/26/2024
AZ-03-01-CIP-PCT-MT	MT	2503	2503		Antibodies	ABANDONED	6 /2 /2005	9 /13/2008
AZ-03-01-CIP-PCT-MX	MX	PCT/EP04/013426			Antibodies	PENDING		11/26/2024
AZ-03-01-CIP-PCT-MY	MY	PI 20044918			Antibodies	ABANDONED		9 /13/2008
AZ-03-01-CIP-PCT-NO	NO	20063026			Antibodies	PENDING		11/26/2024
AZ-03-01-CIP-PCT-NZ	NZ	PCT/EP04/013426			Antibodies	PENDING		11/26/2024
AZ-03-01-CIP-PCT-PH	PH	PCT/EP04/013426			Antibodies	ABANDONED		9 /13/2008
AZ-03-01-CIP-PCT-PK	PK	0948/04			Antibodies	ABANDONED		9 /13/2008
AZ-03-01-CIP-PCT-RU	RU	2006122946			Antibodies	ABANDONED		9 /13/2008
AZ-03-01-CIP-PCT-SG	SG	200603049-8			Antibodies	PENDING		11/26/2024
AZ-03-01-CIP-PCT-TH	TH	095716			Antibodies	ABANDONED		9 /13/2008
AZ-03-01-CIP-PCT-TW	TW	093136755		200530267	Antibodies	ABANDONED		9 /13/2008
AZ-03-01-CIP-PCT-UA	UA	200607109			Antibodies	ABANDONED		9 /13/2008
AZ-03-01-PRV	US	60/525,174			Antibodies	EXPIRED		11/28/2004
AZ-03-01-CIP-PCT-US	US	10/579,445			Antibodies	PENDING		11/26/2024

Confidential materials omitted and filed separately with the Secutities [sic] and Exchange Commission. Asterisks denote such omission.

Note: Entirety of Schedule 8.01(s)(i) was redacted in original filing. Only a portion of the first page of un-redacted Schedule 8.01(s)(i) is shown above.

APPENDIX C

VARIABLE DEFINITIONS

Panel A: Dependent Variables and CT Order Characteristics

MONTHS_TO_APPROVAL	Equals the number of days elapsed between the SEC filing containing a CTR request and CTR approval, divided by 30 and rounded up to the nearest integer.
PROTECTION_PERIOD	Equals the number of years elapsed between the SEC filing containing a CTR request and the date through which the SEC agrees to exempt the firm from disclosure.
SUCCESS	Equals an indicator variable equal to one if the CTR was approved without the registrant amending their request or un-redacting information prior to approval and equal to zero otherwise.
EXHIBIT_COUNT	Equals the number of exhibits listed on the CT Order as containing redactions or the number of exhibits containing CTRs in a pending application.
FORM_8K	Equals one if the registrant redacted information from an 8-K or 6-K filing and equals zero otherwise.
FOREIGN_FILER	Equals one for Form 20-F or 6-K filers, and equals zero otherwise.

Panel B: SOX 408 Criteria

PE_RATIO	Equals the price to earnings ratio as of the 2007 balance sheet date.
HIGH_MVE	Equals one if the firm is in the highest decile of market value of all firms in Compustat as of the 2007 balance sheet date.
HIGH_VOLATILITY	Equals one if the firm beta over (-300, -45) prior to the CTR request is greater than 1.5 and equal to zero otherwise.

Panel C: Proprietary Costs

RD	Equals total research and development expense divided by total assets.
LOG_FIRMS	Equals the natural log of the number of firms operating in the registrant's NAICS code in as reported by the U.S. Census Department's 2007 Economic Census.
SEGMENTS	Equals the natural log of the number of operating segments in 2007 per Compustat.
IND_RD	Equals industry mean research and development expense in 2007 divided by total assets for Compustat firms by 2-digit SIC code.
IND_CAPX	Equals industry mean capital expenditures in 2007 divided by total assets for Compustat firms by 2-digit SIC code.
IND_ROA	Equals industry mean ROA in 2007 for Compustat firms by 2-digit SIC code.

Panel D: Red Flags

RESTATEMENT	Equals one if the firm reported a financial restatement between 2004 and 2007 and equal to zero otherwise.
ICMW	Equals one if the firm reported a Section 404 material weakness between 2004 and 2007 and equal to zero otherwise.
SEC_INVESTIG	Equals one if the SEC investigated the firm for a restatement announced between 2001 and 2008 per Audit Analytics and equals zero otherwise.

Panel E: Firm Characteristics

All firm characteristics are measured as of the fiscal quarter coinciding with the redaction if filed on a periodic filing (10-Q, 10-K, or similar) or measured as the most recent quarter if filed on an 8-K or 6-K.

LOG_ASSETS	Equals the natural log of total assets.
ROA	Equals net income before extraordinary item divided by total assets.
DEBT_RATIO	Equals total short term debt plus total long term debt divided by total assets.
BIGN	Equals to one if the firm was audited by a Big 4 firm in 2008 and equal to zero otherwise.
NEG_CF	Equals one if the firm reported negative operating cash flows and equals zero otherwise.
FOLLOWING	Equals one if at least one analyst covers the firm in 2007 per I/B/E/S and equals zero otherwise.

Panel F: Additional Selection Model Variables

All selection model variables are measured using annual 2007 data

REDACT	Equals one if the firm received approval for a CTR during the full sample period (5/1/08-11/30/09) and equals zero otherwise.
EQUITY_ISSUE	Equals one if the firm issued equity during 2008 per SDC and equals zero otherwise.
DEBT_ISSUE	Equals one if the firm increased total debt during 2007 per Compustat and equals zero otherwise.
#CONTRACTS	Equals the number of Exhibit 10.x filed by the firm during 2007 based on text search of EDGAR metadata headers.
FOREIGN_OP	Equals one if the firm reported foreign income and equals zero otherwise.
PENSION	Equals one if the firm reported pension assets or liabilities in Compustat and equals zero otherwise.
DIVIDENDS	Equals one if the firm paid dividends during the year and equals zero otherwise.
INTANGIBLES	Equals net intangibles divided by total assets.
#FOLLOWING	Equals the number of analysts issuing forecasts for the firm in 2007 per I/B/E/S and equals zero otherwise.
H-INDEX SIC2	Equals a Hirfindahl Index of industry concentration by two-digit SIC code for all firms in Compustat calculated as the sum of the squared market share (firm total revenue/industry total revenue).
H_INDEX NAICS	Equals a Hirfindahl Index of industry concentration by NAICS code for all firms in Compustat calculated as the sum of the squared market share (firm total revenue/industry total revenue).
%FIRMS	Equals the number of firms in an NAICS in 2007 per Compustat divided by the number of firms in an NAICS per the 2007 economic census.

Panel G: Other Variables

DISC_ACCR	Equals the residual from the modified Jones model (Dechow et al. 1995) with additional terms for ROA (Kothari et al. 2005) and an indicator variable for negative operating cash flows (Ball and Shivakumar 2006). Discretionary accruals are measured as of the 10-K coinciding with the CTR or the 10-K preceding the CTR if filed on a quarterly or timely report.

ABS_DISC_ACCR	Equals the absolute value of *DISC_ACCR*.
UNEXPECTED_FEES	Calculated following Hribar et al. 2009 as of the 10-K coinciding with the CTR or the 10-K preceding the CTR if filed on a quarterly or timely report.
CONNECTED	Equals one if the firm made PAC contributions to Congress during the 2006 election cycle and equal to zero otherwise as reported by the Federal Election Commission.
MOST_ADMIRED	Equals one if the firm was listed on the Fortune Most Admired Firm list in 2007.
CIG	Equals one if the firm issued management earnings forecasts during 2007 as reported in First Call and equals zero otherwise.
INITIATAE_CIG	Equals one if the firm did not issue management earnings forecasts during 2007 but issued management earnings forecasts in 2008, and equals zero otherwise.
DISCONTINUE_CIG	Equals one if the firm issued management earnings forecasts in 2007 but did not issue management earnings forecasts in 2008, and equals zero otherwise.
%POINT	Equals the percentage of management earnings forecasts that are classified by First Call as "point" forecasts.
WELLS	Equals one if the firm disclosed receipt of a Wells Notice in 2008 and equals zero otherwise.
302 ICMW	Equals one if the firm reported a material weakness under Section 302 of the Sarbanes Oxley Act and equal to zero otherwise.
COMMENT_DURATION	Equals the natural log of the mean days between the initiation and resolution of SEC comment letters sent to the firm between 2006 and 2010.
#COMMENT	Equals the natural log of the number of comment letters conversations initiated by the SEC to the firm between 2006 and 2010.
COMMENT	Equal to one if the firm was under comment letter review at the time the CTR was requested.
GOING CONCERN	Equals one if the firm received a going concern opinion in the year prior to or year coinciding with the CTR (if filed on an annual report).
MERGER	Equals to one if the firm interested in a merger or acquisition during the year in which the CTR was requested, and equals zero otherwise.
FIRM _AGE	Equals the number of years in which the firm has data available in CRSP as of the year prior to the CTR request.

VITA

Name:	Anne Margaret Thompson
Address:	Texas A&M University Department of Accounting 460 Wehner Building, MS 4353 College Station, TX 77843
Email Address:	athompson@mays.tamu.edu
Education:	B.A., Economics, Harvard College, 2000
	M.S., Accounting, Boston College, 2004